

# Administration Local Anesthesia for the Dental Hygienist

## Open Enrollment

### Course Description:

This course fulfills the Tennessee State Dental Practice Act requirement regarding certification for the administration and monitoring of nitrous oxide analgesia and local anesthesia for the registered dental hygienist, who fulfills Rule 0460-3-.01,.02, or .03. This online didactic course reviews the procedures available for the management of pain and anxiety. Principles of local anesthesia will include anatomy, physiology, pharmacology, armamentarium, technique and complications. Principles of nitrous oxide and oxygen conscious sedation will be covered.

A two-day face-to-face laboratory component will be included to prepare the students for certification in the administration of local anesthesia.

### Course Goal:

The goal of this course is to prepare the practicing dental hygienist to assist the dentist in alleviating and managing patient's dental pain and anxiety. The dental hygienist will be provided background knowledge in how nerve impulses are propagated and blocked, and the mechanics of local anesthetic administration.

### Course Outline:

**UTHSC Dept of Dental Hygiene  
Administration of Local Anesthesia for the Dental Hygienist  
Online Didactic and Clinical Face-to-face Course Outline**

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Introduction & Tennessee Jurisprudence	Tennessee Statutes 63-5-108.(b) (12) 63-5-108.(d) (3) 63-5-108(d)
Philosophy and Concepts of pain control	
Neurophysiology	Chapter 1
Pharmacology of local anesthetics	Chapter 2
Pharmacology of vasoconstrictors	Chapter 3
Clinical actions of local anesthetic agents	Chapter 4
Local anesthesia armamentarium Syringe, needle, cartridge, and topical agents	Chapters 5-8
Preparation of the armamentari	Chapters 9

Physical and psychological evaluation	Chapter 10
Review of clinical anatomy	Chapter 12
Basic technique for maxillary anesthesia administration Basic technique for mandibular anesthesia administration	Chapters 11-14
Anesthesia complications, Local complications, Systemic complications	Chapters 17 & 18

**Learning Objectives - Upon completion of this course the dental hygiene participant will:**

- Understand the philosophy and psychology of local anesthesia,
- Evaluate a patient's medical history and physical status including measurement of vital signs,
- Evaluate indications and contraindications for use of local anesthesia,
- Identify anatomical landmarks that pertain to administration of local anesthesia,
- Understand the physiology of nerve conduction,
- Understand the pharmacology of local anesthetics and vasoconstrictors,
- Be able to select and prepare the proper armamentaria for the administration of local anesthesia,
- Properly record the administration of local anesthetic procedures and complications,
- Be able to manage common medical emergencies as related to the administration of local anesthesia,
- Recognize and manage post-injection complications and reactions to injections,
- Employ infection control techniques including disposal of sharp's,
- Administer local anesthetic agents with emphasis on:
  - technique,
  - aspiration,
  - slow injection,
  - minimum effective dosage,
- Recognize, and manage toxic reactions to local anesthetics and vasoconstrictors,
- Recognize, and manage allergic reactions to local anesthetics and vasoconstrictors,
- Calculate highest safe dose based on patient's weight and/or age,
- Determine the need for reinjection,
- Administer local anesthesia for infiltration,
- Administer local anesthesia for nerve blockage,
- Monitor the patient's physical status while under the effects of local anesthetics.

**Methods of Instruction:**

Online lecture, video, and practice test. Face-to-face demonstrations and clinical practice.

**Evaluation:**

- The dental hygienist will complete a series of fifteen online practice tests, with 100% accuracy.
- The dental hygienist will complete a comprehensive written exam with a minimal score of 70% . If a student is unsuccessful on the initially attempt, they will be able allow to retest one additional time before the entire course must be repeated.
- The dental hygienist must demonstrate competency in the administration of the following local anesthesia injections. Anterior Superior Alveolar, Middle Superior Alveolar, Posterior Superior Alveolar, Inferior Alveolar Block, Nasopalatine, Greater Palatine, Long Buccal, Mental Block, and Lingual Block

**Certification:**

Upon successful completion of this course, the course director will submit a letter to the Tennessee Board of Dentistry (TBOD) which attests to the successful completion and examination grade. The certification application and fee (\$50) must be submitted to the TBOD by the participating dental hygienist. The TBOD will issue a 90-day temporary permit to the dental hygienist. During this extern the student dental hygienist must complete 44 successful injections as prescribed by the TBOD.

**Didactic:** 24-30 online hours (must complete this component prior to clinical)

**Clinical:** 8 – 12 hours of face-to-face clinical practice

**Prerequisites:** Participants must be licensed dental hygienist with a minimum of two years of continuous full-time practice employment within the past three years.

**Texts:** Handbook of Local Anesthesia, 5<sup>th</sup> edition, Malamed, Stanley F., Mosby, 2004. & CD - \$95.40 at Amazon; Supplemental material provided online.

**Supplies:** Clinical Supplies needed: Syringe, clinic jacket, and safety glasses  
All other supplies will be provided on site.

**Question:** Direct Didactic & Clinical questions to:  
Dr. Cassandra Holder-Ballard  
Associate Professor & Program Director  
901-448-6230

Direct Registration questions to:  
Debbie Mount  
Director Non-Degree Programs  
731-881-7082

**Registration:** **Online** - Participants may register for the course online at: [http://www.utm.edu/departments/ecce/dental\\_hygienist\\_registration.php](http://www.utm.edu/departments/ecce/dental_hygienist_registration.php)

By Phone: 731-881-7082

Once registration is complete and payment is processed, you will receive via e-mail your User ID and Password so you may begin the online component course.

**Clinical** - Participants may select from the following dates to complete the clinical component of the course. The 24 – 30 online component must be completed prior to the clinical.

**Clinical Schedule – Choose One:**  
**Fridays 1:00 -5:00 pm and Saturday 8:00 -5:00 pm**

May 4-5, 2012 or December 7-8, 2012

**Location of Clinical:** College of Dentistry  
Dunn Dental Bldg.  
875 Union Ave  
Memphis, TN 38163

**Clinical Limits:** Maximum – 18 (maintaining 1:6 instructor to student ratio)  
Minimum – 12

**Cost:** \$1,000

**Payment:** Check – Make check payable to UT Martin and mail to:  
ECOS, 110 Gooch Hall, UT Martin, Martin, TN 38238

Credit/Debit Card (Visa, MasterCard, Discover) – To pay by credit/debit card, please call ECCE at 731-881-7082.

**Blackboard:** If you are new to online learning/Blackboard, visit our website for helpful student resources using Blackboard @ [www.utm.edu/utonline/students.php#videos](http://www.utm.edu/utonline/students.php#videos)

**Refund Policy:** A Refund may be requested prior to the original date for the clinical component and will be issued according to the following:

100% refund if notified 14 days prior to scheduled weekend  
80% refund if notified 8 – 13 days prior to scheduled weekend  
50% refund if notified less than 7 days prior to scheduled weekend

## Brief Faculty Biographical Sketch of Course Faculty

**Dr. Bobby Collins**, is a Tennessee licensed dentist and adjunct faculty member at the University of Tennessee Health Science Center in the department of dental hygiene. He practiced general dentistry for nearly thirty years. He served on the Tennessee Board of Dentistry 1988-1995 (President, 1993). He served as a member of SRTA from 1988-1995.

His educational background includes:

DDS University of Iowa  
MST Memphis State University  
BS Biology- Memphis State University

**Dr. Cassandra Holder Ballard**, is a Tennessee licensed dental hygienist, an associate professor, and the dental hygiene program director at the University of Tennessee Health Science Center. She has 25 years of clinical dental hygiene experience, 7 years of dental assisting experience, and 15 years of dental hygiene education experience.

Her educational background includes:

Ed.D. University of Memphis  
MPA Memphis State University  
BS Tennessee State University  
AS Tennessee State University

**Eleta Reed-Morgan**, is a Tennessee licensed dental hygienist and the clinical coordinator for the dental hygiene program at the University of Tennessee Health Science Center. She has 10 years of clinical experience and has been an educator for 3 years.

Her educational background includes:

MDH University of Tennessee Health Science  
BS University of Tennessee Health Science  
RDA Tennessee Technology, Memphis

**April V. Williams**, is a Tennessee licensed dental hygienist and assistant professor in the dental hygiene program at the University of Tennessee Health Science Center. She has 9 years of clinical dental hygiene experience, 13 years of clinical dental assisting experience, and has been an educator for 4 years.

Her educational background includes:

MDH University of Tennessee Health Science.  
BS Baker College, Flint Michigan  
AS Macon State College, Georgia  
EDA Armstrong College, Savanna Georgia

**Schelli Stedke**, is a Tennessee licensed dental hygienist and adjunct faculty member at the University of Tennessee Health Science Center in the department of dental hygiene. She has 17 years of clinical dental hygiene experience.

Her educational background includes:

Currently pursuing MDH from the University of Tennessee Health Sciences Center  
BS Ohio State University

**Course Director**  
**Bobby L. Collins, DDS**

**Taught by**  
**The University of Tennessee Health Science Center**  
**College of Allied Health Sciences**  
**Department of Dental Hygienist**

**Sponsored by**  
**The University of Tennessee at Martin**  
**Office of Extended Campus and Continuing Education**