

Montgomery County Community College
DHG 226
Dental Pain Control
2-1-2

COURSE DESCRIPTION:

The course is a study of the basic and current concepts in the administration of local dental anesthetics. Topics examined include the mechanism of action, local and systemic effects, tissue diffusion and toxicity of anesthetic agents used in dentistry. Patient assessment including medical considerations, apprehension and pain threshold will be evaluated for determining the indications and contraindications of dental pain control. Selection of appropriate anesthetic agents and proper administration techniques will be emphasized. The pharmacology, principles of nitrous oxide-oxygen analgesia administration, patient considerations and legal issues will be discussed. Anatomical considerations for the administration of local anesthesia are reviewed. This course is subject to a course fee. Refer to <http://mc3.edu/adm-fin-aid/paying/tuition/course-fees> for current rates.

REQUISITES:*Previous Course Requirements*

- DHG 158 Theory and Practice of Dental Hygiene II
- DHG 159 Histology & Pathology of Oral Tissues
- DHG 161 – Periodontics I

Concurrent Course Requirements

- DHG 224 Materials in Dentistry
- DHG 225 Oral Pharmacology

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Explain factors that affect pain.	Lecture Recordings Assigned Readings Web-Based Modules	Quizzes Exams
2. Identify anatomic landmarks for injections.	Lecture Recordings Assigned Readings Web-Based Modules Laboratory Activities	Quizzes Exams Laboratory Competencies
3. Explain adverse effects of local anesthesia.	Lecture Recordings Assigned Readings Web-Based Modules Laboratory Activities	Quizzes Exams
4. Determine the maximum recommended dose for	Lecture Recordings Assigned Readings Web-Based Modules	Quizzes Exams Case Studies

local anesthesia.	Laboratory Activities	Laboratory Competencies
5. Differentiate between anesthesia agents.	Lecture Recordings Assigned Readings Web-Based Modules Laboratory Activities	Quizzes Exams Case Studies Laboratory Competencies

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria.*

SEQUENCE OF TOPICS:

1. Course Overview
2. Physiologic and Psychological Considerations of Pain
3. Physiology and Neurophysiology of Local Anesthetic Agents
4. Pharmacology of Local Anesthetic Agents/Vasoconstrictors
5. Drug Selection/Calculations
6. Patient Evaluation/Precautions and Complications Associated with Local Anesthetic Agents
7. Armamentarium
8. Anatomic Considerations
9. Maxillary Injection Techniques
10. Mandibular Injection Techniques
11. Nitrous Oxide-Oxygen Analgesia
12. PA DH Practice Act

LEARNING MATERIALS:

Text:

Bassett, K. and DiMarco, A. (2015). *Local Anesthesia for Dental Professionals*. New Jersey: Prentice Hall, Inc.

Fehrenbach, Margaret J. and Herring, Susan W. *Illustrated Anatomy of the Head and Neck 6th Edition*, St. Louis: Saunders. 2020.

Required Materials:

1st year DHG supply kit – purchased for previous course with specialized course materials form DHG Clinic uniform – purchased for previous course directly from private vendor

Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

COURSE APPROVAL:

Prepared by: Brenda Sue Martin, RDH, M.S.	Date: 1/2010
VPAA/Provost Compliance Verification: Dr. John C. Flynn, Jr.	Date: 4/27/2010
Revised by: Jenny Sheaffer	Date: 10/16/2012
VPAA/Provost or designee Compliance Verification: Victoria L. Bastecki-Perez, Ed.D.	Date: 11/1/2012
Revised by: L. Teal Mercer	Date: 11/13/2017
VPAA/Provost or designee Compliance Verification: Victoria L. Bastecki-Perez, Ed.D.	Date: 1/8/2018
Revised by: Kimberly Beadencup	Date: 2/14/2020
VPAA/Provost or designee Compliance Verification: Victoria L. Bastecki-Perez, Ed.D.	Date: 2/14/2020
Revised by: Kimberly Beadencup	Date: 3/1/2021
VPAA/Provost or designee Compliance Verification: Gloria Oikelome, Ed.D.	Date: 3/10/2021
Revised by: Kimberly Beadencup	Date: 3/2023
VPAA or designee Compliance Verification:	Date: 5/2/2023



This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.