

**CHATTANOOGA STATE COMMUNITY COLLEGE  
CHATTANOOGA, TENNESSEE**

**ALLIED HEALTH DIVISION**

**COURSE SYLLABUS**

**DH 255 Dental Hygiene Pain Management**

**Instructor: Hartly Varnell; Michelle Mould  
Angie Maida; Judy Mabe**

**Credit Hours: 4**

**Phone: (423) 697-4768**

**Semester: Summer**

**E-mail: hartly.varnell@chattanoogastate.edu**

**Room: 2031 & 2007 HSC**

**Catalog Course Description:**

This course is designed to prepare dental hygiene students to safely and competently administer local anesthetic agents and nitrous oxide sedation to control dental related pain with a minimum of patient discomfort. Included are content areas in anatomy, physiology, pharmacology, and emergency management as they relate to the administration of local anesthetics, nitrous oxide, and pain control. Laboratory sessions are structured to develop actual experiences in administration of local anesthetics and nitrous oxide. Various mechanisms for pain control are also covered; Satisfactory/Non-Satisfactory grading; Lab 6 hours;

**Prerequisites:**

- Completion of DH 132,135,142,145
- Students must hold current CPR certification (AHA Healthcare Provider Level)

**Textbook/Materials:**

- Handbook of Local Anesthesia (current addition)-Malamed
- Dental syringe (aspirating style)

**Student Learning Outcomes (Program Student Learning Outcomes & Course Student Learning Outcomes)**

**PSLO #1:** The dental hygiene program exists to prepare graduates to protect him/herself and their patient from harm during assessment, planning, implementation and evaluation procedures.

CSLO 1-1: Recognize potential emergency situations and respond according to established protocols.

CSLO 1-2: Practice in accordance with the state rules and regulations that govern the practice of dental hygiene.

CSLO 1-3: Comply with OSHA infection control guidelines to control the spread of infectious diseases.

**PSLO #2:** The dental hygiene program exists to prepare graduates to assess a patient's medical and dental history and oral soft and hard tissues using systematic data collection and analysis.

CSLO 2-1: Assess a patient's medical and dental history employing principles of pharmacology.

**PSLO #3:** The dental hygiene program exists to prepare graduates to plan realistic treatment and prevention goals and strategies using effective decision making procedures.

**PSLO #4:** The dental hygiene program exists to prepare graduates to treat dental diseases by providing dental hygiene care, recommending dental treatment, and evaluating outcomes.

CSLO 4-1: Manage a patient's dental pain with an understanding of the physiological, psychological, and pharmacological implications of various drugs and their interactions with the human body.

**PSLO #5:** The student will prevent dental diseases by providing patient care services and planning, and implementing community health programs.

**PSLO #6:** The dental hygiene program exists to prepare graduates who exhibit the values and skills necessary for life-long learning, self-improvement, and professional development.

### **Instructional Activities**

- Lecture
- Collaborative group activities
- Role play scenarios
- Information and Technology: internet, audio, video
- Clinical/laboratory applications

### **Required Assessments:**

#### **A. Daily Quizzes:**

1. Armamentarium for Local Anesthetic Administration (PSLO 1;CSLO 1-3)
2. Basic Injection Techniques and Anatomical Considerations (PSLO 4;CSLO 4-1)
3. Pain (Neurophysiology & Behavior Management (PSLO 4;CSLO 4-1)
4. Pharmacology of Local Anesthetic Agents (PSLO 4; CSLO 4-1)
5. Pharmacology of Vasoconstrictors (PSLO 4;CSLO 4-1)
6. Patient Evaluation & Communication (PSLO 2;CSLO 2-1)
7. Local & Systemic Complications (PSLO 1;CSLO 1-3)
8. Administration & Monitoring of Nitrous Oxide (PSLO 4;CSLO 4-1)
9. Supplemental Techniques (PSLO 4;CSLO 4-1)
10. General Legal Considerations and State Practice Act (PSLO 1;CSLO 1-2)
11. Analgesics (PSLO 4;CSLO 4-1)
12. Anti-anxiety Drugs (PSLO 4;CSLO 4-1)

#### **B. Written Competency Examinations**

1. Comprehensive Local Anesthesia Final (PSLO 1;CSLO 1-1,1-2,1-3/PSLO 2;CSLO 2-1/PSLO 4;CSLO 4-1)
2. Comprehensive Nitrous Oxide Final (PSLO 1;CSLO 1-1,1-2,1-3/PSLO 2;CSLO 2-1/PSLO 4;CSLO 4-1)

#### **C. Additional Graded Activities: Satisfactory or Non-satisfactory**

1. Administration of PSA & MSA injections (PSLO 1;CSLO 1-1,1-2,1-3/PSLO 2;CSLO 2-1/PSLO 4;CSLO 4-1)
2. Administration of ASA injection (PSLO 1;CSLO 1-1,1-2,1-3/PSLO 2;CSLO 2-1/PSLO 4;CSLO 4-1)
3. Administration of GP & NP injections (PSLO 1;CSLO 1-1,1-2,1-3/PSLO 2;CSLO 2-1/PSLO 4;CSLO 4-1)
4. Administration of M injection (PSLO 1;CSLO 1-1,1-2,1-3/PSLO 2;CSLO 2-1/PSLO 4;CSLO 4-1)

5. Administration of the IA(L) & LB injection (PSLO 1;CSLO 1-1,1-2,1-3/PSLO 2;CSLO 2-1/PSLO 4;CSLO 4-1)

**CSLO/Assessment Alignment**

<b>Course DH 255</b>	<b>CSLO 1-1</b>	<b>CSLO 1-2</b>	<b>CSLO 1-3</b>
	Local & Systemic Complications Comprehensive Local Anesthesia Final Comprehensive Nitrous Oxide Final Administration of PSA & MSA injections Administration of ASA injection Administration of GP & NP injections Administration of M injection Administration of the IA(L) & LB injection	State Practice Act Supplemental Techniques & General Legal Considerations Comprehensive Local Anesthesia Final Comprehensive Nitrous Oxide Final Administration of PSA & MSA injections Administration of ASA injection Administration of GP & NP injections Administration of M injection Administration of the IA(L) & LB injection	Armamentarium/Local Anesthetic Comprehensive Local Anesthesia Final Comprehensive Nitrous Oxide Final Administration of PSA & MSA injections Administration of ASA injection Administration of GP & NP injections Administration of M injection Administration of the IA(L) & LB injection
	<b>CSLO 2-1</b>	<b>CSLO 4-1</b>	
	Patient Evaluation & Communication Comprehensive Local Anesthesia Final Comprehensive Nitrous Oxide Final Administration of PSA & MSA injections Administration of ASA injection Administration of GP & NP injections Administration of M injection Administration of the IA(L) & LB injection	Basic Injection Techniques and Anatomical Considerations Pain (Neurophysiology & Behavior Management) Pharmacology of Vasoconstrictors Pharmacology of Local Anesthetic Agents Basic Injection Techniques and Anatomical Concerns Administration & Monitoring of Nitrous Oxide Analgesics Anti-anxiety Drugs Comprehensive Local Anesthesia Final Comprehensive Nitrous Oxide Final Administration of PSA & MSA injections Administration of ASA injection Administration of GP & NP injections Administration of M injection Administration of the IA(L) & LB injection	

**Course Grading Policy**

All Chattanooga State dental hygiene clinical applications courses are graded on a satisfactory/non-satisfactory basis. No letter grade is given. To receive a "satisfactory" in DH 255 Dental Hygiene Pain Management, you must,

- Attend ALL scheduled classes and clinic sessions. This course introduces new injections and evaluates previously introduced injections each week. As you will actually be injecting a drug into another person, you will not be allowed to administer local anesthetic injections or nitrous oxide in the clinic/lab if you have not attended the associated lecture. With only 6 weeks in the semester, there will not be time for make-up sessions. **TN State Law requires mandatory attendance in all course and clinical work related to the administration of local anesthesia and nitrous oxide to be eligible for certification.**
- Satisfactorily perform all injections (3 attempts given). Critical errors in technique will result in no credit for a specific attempt. See your advisor if competency is in question.
- Earn at least a cumulative score of 80% on the 10 daily quizzes. Half of the quizzes will be taken on your own. Half will be taken in small randomly chosen groups. These quizzes are given at the beginning of each lecture over that day's module.
- Complete the Nitrous Oxide Process Evaluation. (with assistance)
- Satisfactorily complete the DH 255 comprehensive written final examinations. \*\*TN state law requires a minimum grade of 75% on the written nitrous exam and a minimum grade of 70% on the written local anesthesia exam for state licensure. Remediation and re-examination will be in compliance with the TN state dental practice act.
- Satisfactorily complete the DH 255 clinical final examination. (2 randomly selected injections (without assistance)
- Comply with all OSHA, CDC, & TN BOD personal and patient safety requirements required for the administration of local anesthetic agents and nitrous oxide sedation.

All other required activities and activities associated with modules are graded on a satisfactory/non-satisfactory basis and must be graded "satisfactory."

An intervention plan will be developed if it appears to your advisor that you may be at risk for a non-satisfactory.

Students receiving a non-satisfactory will not be able to continue in the program. Their case will be reviewed by the Dental Hygiene Re-admittance Committee regarding re-admittance into the program.

### Weekly Topic and Exam Schedule

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:00 - 10:00 Classroom		8:00 - 10:00 Classroom		
10:15-5:15 (One hour lunch) Clinic		10:15-5:15 (One hour lunch) Clinic		

#1 Week of 5/17

	8 AM	10:15 AM
Mon	First Day of Classes Introduction  Quiz #1  Module Armamentarium for Local Anesthesia Administration	Introduction and Review Anatomy, Syringe Assembly, etc.

Tues		
Wed	Quiz # 2  Module Basic Injection Technique and Anatomical Considerations  Introduction to the PSA and MSA Malamed text Chapter 13	Practice PSA & MSA
Thur		
Fri		

#2 Week of: 5/24

	8 AM	10:15 AM
Mon	Quiz # 3  Module Pain (Neurophysiology and Behavioral Management)  Jeopardy Game Handout  Introduction to the ASA Malamed text Chapter 13	Eval on PSA & MSA Practice ASA
Tues		
Wed	Quiz # 4  Module Pharmacology of Local Anesthetic Agents  Introduction to the GP & NP Malamed text Chapter 13	Eval on ASA Practice GP & NP
Thur		
Fri		

#3 Week of: 5/31

	8 AM	10:15 AM
Mon	Memorial Day - No Class	
Tues		

Wed	Quiz # 5 Module Pharmacology of Vasoconstrictors <u>Introduction to the Mental</u> Malamed text Chapter 14 Documentation Exercise Due	Eval GP & NP Practice Mental
Thur		
Fri		

#4 Week of: 6/7

	8 AM	10:15 AM
Mon	Quiz # 6 Quiz # 7 Modules Patient Evaluation and Communication Local and Systemic Complications <u>Introduction to the IA (L) &amp; Long Buccal</u> Malamed text Chapter 14 Documentation Feedback Due	Eval Mental Practice IA (L) & LB
Tues	8:30-1:00pm Room 1087 Module Administration and Monitoring of Nitrous Oxide Quiz #8 (end of lecture) (DH and DA together) Drug Definitions Assignment Due	
Wed	NO CLASS	
Thur		
Fri		

#5 Week of: 6/14

	8 AM	10:15 AM
Mon	Quiz # 9 Module Supplemental Techniques and General Legal Considerations	Nitrous Process Eval Eval IA/L & LB

	<p>State Practice Act: What the law says the RDH can do!</p> <p><a href="http://health.state.tn.us/Boards/Dentistry/index.htm">http://health.state.tn.us/Boards/Dentistry/index.htm</a> follow the above line to the TN BOD and search for the Dental Hygiene Practice Act...review the rules and regulations for the administration of local anesthesia by the dental hygienist; be prepared for classroom discussion</p>	Review and Practice Maxillary Injections
Tues		
Wed	<p>Quiz # 10 Modules Analgesics Anti-Anxiety Drugs</p> <p><b>**All reading assignments come from Haveles textbook-bring to class</b></p> <p><b>**Bring Drug Handbook to class</b></p>	<p>Nitrous Process Eval Continued</p> <p>Review and Practice Mandibular Injections</p>
Thur		
Fri		

#6 Week of: 6/21

	8 AM	10:15 AM
Mon	<p>Comprehensive Written Final Exams</p> <p>Local Anesthesia Exam - 70 questions Nitrous Oxide Exam - 30 questions</p> <p><b>**TN state law requires a minimum grade of 75% on the written nitrous exam and a minimum grade of 70% on the written local anesthesia exam for state licensure.</b></p>	<p>Clinical Final Exam</p> <p>Demonstrate 2 random injections with no assistance</p>
Tues		
Wed	<b>Remediation as indicated</b>	Grades Due

## **College Policies**

**This class is governed by the policies and procedures stated in the current Chattanooga State Student Handbook. Additional or more specific guidelines may apply.**

### **ADA Statement**

Students who have educational, psychological, and/or physical disabilities may be eligible for accommodations that provide equal access to educational programs and activities at Chattanooga State. These students should notify the instructor immediately, and should contact Disabilities Support Services within the first two weeks of the semester in order to discuss individual needs. The student must provide documentation of the disability so that reasonable accommodations can be requested in a timely manner. All students are expected to fulfill essential course requirements in order to receive a passing grade in a class, with or without reasonable accommodations.

### **Disruptive Students**

The term "classroom disruption" means – student behavior that a reasonable person would view as substantially or repeatedly interfering with the activities of a class. A student who persists in disrupting a class will be directed by the faculty member to leave the classroom for the remainder of the class period. The student will be told the reason(s) for such action and given an opportunity to discuss the matter with the faculty member as soon as practical. The faculty member will promptly consult with the division dean and the college judicial officer. If a disruption is serious, and other reasonable measures have failed, the class may be adjourned, and the campus police summoned. Unauthorized use of any electronic device constitutes a disturbance. Also, if a student is concerned about the conduct of another student, he or she should please see the teacher, department head, or division dean.

### **Affirmative Action**

Students who feel that he or she has not received equal access to educational programming should contact the college affirmative action officer.

### **Academic Integrity/Academic Honesty**

In their academic activities, students are expected to maintain high standards of honesty and integrity. Academic dishonesty is prohibited. Such conduct includes, but is not limited to, an attempt by one or more students to use unauthorized information in the taking of an exam, to submit as one's own work, themes, reports, drawings, laboratory notes, computer programs, or other products prepared by another person, or to knowingly assist another student in obtaining or using unauthorized materials. Plagiarism, cheating, and other forms of academic dishonesty are prohibited. Students guilty of academic misconduct, either directly or indirectly through participation or assistance, are immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions, which may be imposed through the regular institutional procedures as a result of academic misconduct, the instructor has the authority to assign an "F" or zero for an activity or to assign an "F" for the course.

### **Email Communication**

Please note all communication with instructors about your course work should be through the eLearn Email system. For assistance on how to use the eLearn Email tool go to this url: [http://river.chattanoogastate.edu/orientations/Student\\_PDFs/eLearn\\_eMail\\_aug09.pdf](http://river.chattanoogastate.edu/orientations/Student_PDFs/eLearn_eMail_aug09.pdf).

For all other communication the official email system used by the college is through Tiger Mail. This is accessible by clicking the blue paw icon from the top right hand side of your Tiger Web home page <https://tigerweb.chattanoogastate.edu/cp/home/displaylogin>.

**The instructor reserves the right to modify this syllabus in writing during the course of the semester.**



## **Program Policies**

### **FIRE PROCEDURE**

The following is the procedure if the fire alarm sounds:

Classroom HSC #2031 or Clinic HSC #2007

- Exit the building using the closest stairway
- Walk to TTC parking lot on the far side of the pond (500 feet away from HSC building)
- Do not reenter the building until notified,

### **MEDICAL EMERGENCY PROCEDURE**

If a person in or around the dental clinic demonstrates any symptoms of a potential life threatening situation, including chest pain, breathing difficulties, nausea, bleeding, or lightheadedness, the following procedure should be employed:

The student should discontinue all treatment and alert a faculty member of the situation,

The faculty member should assess and do one of two things,

1. Immediately call 911 and initiate basic life support,
2. Contact (in order of availability) the Dental Hygiene Director, the Dean of Nursing and Allied Health, or a member of the Respiratory Therapy faculty,

Under the direction of a faculty member, the student should be prepared to assume their role as an emergency team member and be prepared to:

1. Retrieve the AED (Automatic External Defibrillator) - located in the Second Floor of HSC (across from elevators)
2. Administer oxygen
3. Secure the emergency kit
4. Secure the first aid kit
5. Assist with CPR

Contact campus security: 605-4092 (cell), 846-0268 (pager), 697-4467 (security office) or Chief Hill 697-4476

### **INJURY PROCEDURE**

When a non life threatening injury occurs to anyone in or around the dental clinic or dental laboratory alert a faculty member to the situation, then,

#### **Eye Injury**

Determine if contaminants are still in the eye,

If appropriate, secure the MSDS information for instructions (Call 1-800-451-8346)

Remove the contaminant using appropriate equipment including the eye wash station,

#### **Percutaneous Injury**

Stop any bleeding,

If appropriate, secure the MSDS information for instructions (Call 1-800-451-8346),

Clean and dress the wound as necessary,

Determine if infectious material is involved and if follow up care is necessary including testing for blood borne pathogens or tetanus. If testing is deemed necessary, it will be done at the student's expense.

Complete an Injury Report form obtained from the clinic coordinator.

## **HAZARDOUS WASTE SPILL PROCEDURE**

In the event of a hazardous waste spill in or around the dental clinic, the following procedure should be employed;

- Contact a faculty member immediately,
- Identify the spilled material,
- Use the MSDS information (available by calling 1-800-451-8346) to determine precautions,
- Secure safety attire including gloves, glasses and gown,
- Secure the hazardous waste spill kit,
- Clean the spill using the material in the kit,
- Dispose of the spill in the hazardous waste disposal box

## **BLOODBORNE PATHOGEN POLICY**

See the Nursing and Allied Health Student Handbook.

## **PROGRAM FORMAT & PRINTING POLICY**

The dental hygiene program at Chattanooga State is considered a "hybrid" program, meaning that the format requires **significant online activity**. Students in hybrid courses must access course content and assessments using the internet in order to pass the courses and successfully progress through the program. You will need access to Microsoft Office 2007 WORD and PowerPoint to complete required assignments and activities over the duration of the program. Additionally, access to a high-speed internet connection is imperative.

All course materials including syllabi, learning objectives, handouts, etc. are accessed online at <http://dhonline.chattanoogastate.edu/opener.htm>. Faculty are not required to supply any printed materials to the students.

It is highly recommended, due to the amount of material, that students save documents to a flash drive or their home computer, rather than print paper copies. The Dental Hygiene Department cannot print documents or make copies for students. Campus printing services are available for a fee through the library or the college print shop located in OMN 161.

## **CELL PHONE POLICY**

**Cell phones are NOT permitted in the classroom or the clinic (even if they are turned off or set to vibrate). Please leave cell phones in your lockers.** Text messaging and making/receiving personal calls during class or clinic is not professional or acceptable. You may check for messages at breaks, lunch, etc. In the event that someone needs to contact you during class or clinic, please give that person the phone number of the Clinic Coordinator, Linda Sparks. 423-697-4481. She will come and get you if you receive an emergency phone call.

## **CONTINUATION/RETENTION POLICY**

If a student receives a "D" or an "F" in a non-dental hygiene didactic course, that course must be repeated unless the student receives a waiver from the Dental Hygiene Re-admittance Committee. Students receiving a "D" or "F" in a dental hygiene didactic course or a "non-satisfactory" in a dental hygiene applications course will not be allowed to continue in the dental hygiene program. The Dental Hygiene Re-admittance Committee will review each such case and make a recommendation regarding re-admittance. Because dental hygiene courses are only offered once a year, re-admittance may be delayed.

Students failing first semester courses will be placed in the applicant pool for the next class and will be considered with all other applicants. There is no guarantee a failing student will be readmitted.

**A student may only be readmitted once.**

## DISABILITY POLICY

Students who have educational, psychological, and/or physical disabilities may be eligible for accommodations that provide equal access to educational programs and activities at Chattanooga State. **These students should notify the instructor immediately**, and should contact Disabilities Support Services (S-226, phone 697-4452) **within the first two weeks of the semester** in order to discuss individual needs. The student must provide documentation of the disability so that reasonable accommodations can be requested in a timely manner. All students are expected to fulfill essential course requirements in order to receive a passing grade in a class, with or without reasonable accommodations

## ACADEMIC INTEGRITY

Students in the dental hygiene program are on their honor. In the event a student does not respect that honor and flagrantly plagiarizes, cheats, misrepresents the truth, or any other act considered by the academic community to be illegal, unethical or immoral, that student, at the discretion of the faculty, may be dismissed from the program.

## STUDENT PREGNANCY POLICY

A student who becomes pregnant during matriculation must provide a signed statement from her physician indicating she may continue in the program. A student will be given every reasonable consideration. Please notify your advisor as soon as possible to discuss possible accommodations for the semester.

With regard to exposing radiographs, according to Tennessee State law it is up to the student to make a declaration of pregnancy. If a student makes such a declaration, she must provide a written statement from her physician indicating that she may expose radiographs if established safety protocols are followed.

## BLOOD PRESSURE POLICY

All adult patients treated in the CHSCC Dental Hygiene Clinic have their blood pressure and pulse taken at the beginning of every dental hygiene visit. Patients are verbally informed of these readings prior to initiating treatment.

The table below depicts blood pressure categories utilized by this program.

BP Category	Systolic	Diastolic
Normal	< 120	< 80
Pre-hypertension	120-139	80-89
Hypertension Stage 1	140-159	90-99
Hypertension Stage 2	>160	>100

Wilkins, E.M. (2009). Clinical Practice of the Dental Hygienist, 10th Ed., Lippincott, Williams, & Wilkins; p: 136.

Any patient with a systolic reading  $\geq 160$  and/or diastolic reading  $\geq 100$  will be advised to consult their physician for further blood pressure evaluation.

If a patient with these readings is already being treated for hypertension, the student and instructor together, will determine whether contact with the patient's physician is necessary prior to the provision of routine dental hygiene care. This decision must be based on the treatment planned, length of appointment, and any other medical risk factors.

If the patient is not under the care of a physician, the student, the instructor, and the supervising dentist together, will determine if the patient may be treated at that time based on the treatment planned, length of appointment, and any other medical risk factors. The patient will still be advised to consult a physician for evaluation.

A blood pressure reading  $\geq 180/110$  requires automatic patient dismissal and a written physician's

signed release prior to being rescheduled in the CSTCC DH Clinic. \*[Wilkins, E.M. (2009). Clinical Practice of the Dental Hygienist, 10th Ed., Lippincott, Williams, & Wilkins; p:143]

### **CPR POLICY**

See the Nursing and Allied Health Student Handbook. A copy of your current CPR card must be given to the clinical coordinator.

### **LIABILITY INSURANCE**

Students are required to maintain liability insurance each semester of enrollment. The insurance is purchased at the Bursar's office following acceptance and prior to enrollment in the first clinical course. The insurance is in effect for one year from the date of purchase. The insurance must be renewed each year and is required to be in place for regional clinical boards.

### **DRESS POLICY**

The Dental Hygiene Program adheres to the Dress Code/Personal Hygiene Expectations set by the Division of Nursing and Allied Health. A copy of these expectations is available in the Nursing and Allied Health Student Hand Book.

Professional dress is necessary at all times, especially in or around the clinic area where patients are being treated. Patient rapport and trust begins immediately when the patient sees you and your classmates.

The following are specific when you are assigned to be in the clinic:

- short fingernails; artificial nails and any polish (even clear) are prohibited due to infection control
- hair for males and females should be such that it is off the collar and does not fall forward into the face or work area when the head is bent
- beards for males must be short and neatly trimmed around the neck and mouth.
- one pair of small stud earrings, no additional ear piercings
- simple watch, no necklaces or bracelets (unless medical warnings)
- no visible body piercings; tattoos must be covered
- one smooth wedding band (if applicable); no stones, grooves, crevices, etc.
- avoid perfume, lotion, tobacco smoke, etc. - patients may allergic
- clinic shoes must be close-toed and close-heeled; they should be predominantly white and kept clean at all times
- clean and appropriately hemmed scrubs; calf-length white socks
- clean clinic coat (please inspect clinic coat prior to entering clinic, if it is torn, stained, etc. please give it to Linda Sparks and select a different coat)

### **PREMEDICATION POLICY**

As of June 2007 guidelines regarding premedication before dental care have changed. Please go to the following website to see the new guidelines

[New Guidelines for Antibiotic Prophylaxis](#)