Welcome!
Welcome juniors! You are well on your way to realizing your dream of becoming a dental hygienist, a most valuable healthcare professional. This semester you will begin seeing your first patients, and as such, we will work together to add the art and science of pain management to your foundation for the excellent delivery of patient care.

II. Required Texts
Handbook of Nitrous Oxide & Oxygen Sedation by Clark, Morris & Brunick. 4th edition

III. Recommended Texts

IV. Course Prerequisites/Co-requisites
Admission to the Baccalaureate Dental Hygiene Program. Students should have knowledge of the basic biological, biochemical, physiological, and microbiological sciences with an understanding of
how each relates to human health. Additionally, students must have successfully completed Head and Neck Anatomy.

V. **University Course Catalog Description**
Comprehensive information and skills for providing comfortable dental treatment. Local anesthesia and nitrous oxide-oxygen administration are explained and practiced.

VI. **Methods of Instruction**
Collaborative Learning, Class Discussion, Peer Teaching, Demonstration, Audio-visual presentation, and Lecture

VII. **Course Rationale**
The delivery of comfortable dental/dental hygiene care is an art and science that patients welcome. This course provides instruction, clinical experience and assessment of atraumatic techniques of local anesthesia delivery. Methods of sedation will be introduced, with an emphasis on nitrous oxide/oxygen sedation.

VIII. **Course Goal**
Introduction and experience with safe pain management strategies including topical, injectible, and subgingival local anesthetic delivery and nitrous oxide/oxygen analgesia induction experiences.

Core Competencies (C)

C.3 Provide dental hygiene care to promote patient/client health and wellness using critical thinking and problem solving in the provision of evidenced-based practice.

Patient/Client Care (PC)

PC. 1d. Recognize health conditions and medications that impact overall patient care.
PC. 1e. Identify patients at risk for a medical emergency and manage the their care in a manner that prevents an emergency.
PC. 2b. Identify patient needs and significant findings that impact the delivery of dental hygiene services.
PC. 2c. Obtain consultations as indicated.
PC. 3d. Make referrals to other health care professionals.
PC. 3e. Obtain the patient’s informed consent based on a thorough case presentation.
PC. 4b. Control pain and anxiety during treatment through the use of accepted clinical and behavioral techniques.

IX. **Course Objectives/Learning Outcomes**
At a minimum, upon successful completion of this learning opportunity, the student will:
1. Explain how pain and anxiety can impact the cardiovascular system, emotions and behavior.
2. Recognize and manage patient anxiety and pain.
3. Explain the physiology and pharmacology of local anesthesia.
4. Demonstrate a commanding knowledge of local anesthetics and vasoconstrictors used in dentistry.
5. Describe the medical issues impacting the use of local anesthetics and vasoconstrictors in dental care and.
6. Describe possible local and systemic complications of local anesthesia and how to manage them.
7. Utilize local anesthesia armamentarium with appropriate safety and infection control considerations.
8. Explain the anatomy of areas anesthetized with local anesthesia for dental/dental hygiene care.
9. Explain the penetration site, depth of penetration, deposition site, amount deposited and area anesthetized for the following injections: infiltration, anterior superior alveolar, posterior superior alveolar, MSA, AMSA, 3-step and 1-step nasopalatine, greater palatine, incisive, inferior alveolar, lingual, long buccal.
10. Simulate with cotton-tipped applicator and syringe with needle sheathed the following injections: infiltration, anterior superior alveolar, MSA, AMSA, posterior superior alveolar, nasopalatine, greater palatine, incisive, inferior alveolar, lingual long buccal.
11. Perform the following injections: infiltration, anterior superior alveolar, MSA, AMSA, posterior superior alveolar, nasopalatine, greater palatine, incisive/mental, inferior alveolar, lingual, long buccal.
12. Demonstrate how to make a chart entry for the administration of local anesthesia.
13. Explain the physiology and pharmacology of nitrous oxide utilization.
14. Explain the medical considerations and precautions with the use of nitrous oxide.
15. Demonstrate the use of nitrous oxide equipment in administration to patient.

X. Instruction Methods and Materials

XI. Attendance Policy: See Dental Hygiene Program Policies

Tardiness: To extend courtesy to your fellow classmates and the faculty, it is expected that you will arrive promptly and prepared to all class meetings. On scheduled lab days, it is expected that you will arrive early enough to allow time to review your patient’s chart, obtain all necessary supplies, perform personal hygiene and set up your operatory prior to the start of lab.

Attendance: Course directors must be notified of absences due to illness, or personal or family emergencies beyond the control of the student. The student is required to contact the Academic Affairs and the Program Director promptly in case of absence or tardiness so that proper and timely adjustments can be made to the day’s activities. An excused absence is recognized when students contact the persons listed above regarding illness or family emergency or when other proper written notification has been received and approved. Absences must be phoned in daily. If a student is absent for three or more consecutive days, certification from a health care provider is necessary. Religious observances cited in the handbook will be followed.

Safe learning environment: Specialized learning equipment, use of local anesthetic drugs and raw food handling may compromise environmental safety. Therefore, food and beverages (except plain water) will not be permitted in the classroom, clinic, or lab environments, without exemption by the course director. If class meetings exceed 1 hour, a brief nutrition and rest break will be afforded students and faculty approximately each hour. Clinic/lab days require hair to be restrained and scrubs are to be worn.
XII. Course Evaluation

The final grade in these courses will be based on:

<table>
<thead>
<tr>
<th>Grading Scale (%)</th>
<th>Points Applied Toward Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>A</td>
</tr>
<tr>
<td>80 - 89</td>
<td>B</td>
</tr>
<tr>
<td>70 - 79</td>
<td>C</td>
</tr>
<tr>
<td>60 - 69</td>
<td>D</td>
</tr>
<tr>
<td>0 - 59</td>
<td>F</td>
</tr>
</tbody>
</table>

XIII. Supplementary Texts and Materials


XIV. Basis for Final Grade

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Points Applied Toward Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professionalism</td>
<td>10 points</td>
</tr>
<tr>
<td>Skill Evaluation Techniques</td>
<td>Pass/Repeat</td>
</tr>
<tr>
<td>Quizzes (8@5 points each)</td>
<td>40 points</td>
</tr>
<tr>
<td>Midterm Examination</td>
<td>50 points</td>
</tr>
<tr>
<td>Sedation Exam</td>
<td>30 points</td>
</tr>
<tr>
<td>Comprehensive Final Examination</td>
<td>100 points</td>
</tr>
<tr>
<td></td>
<td>230 points</td>
</tr>
</tbody>
</table>

XV. Grade Dissemination

Graded tests and materials in this course will be returned individually only upon request for review. You can access your scores at any time using the Grade Book function of Sakai. Please note that scores posted in Sakai are unofficial grades. Official final course grades will be posted on Inside Pacific.

XVI. Course Policies: Grades

Late Work Policy:

There are no make-ups for in-class writing or quizzes. Make-up of the midterm or the final exam will require permission from the course director and/or program director. Assignments turned in late (with an excused absence) will generally be assessed a penalty: 10% if it is one day late, or 20% for 2 days late. Assignments will not be accepted if overdue by more than two days.

Extra Credit Policy:

If extra credit is granted, the additional points are added to the "First Midterm" portion of the semester grade. You cannot earn higher than 100% on the "First Midterm" portion of the grade; any points over 100% are not counted.

Grades of "Incomplete":

The current university policy concerning incomplete grades will be followed in this course. Incomplete grades are given only in situations where unexpected emergencies prevent a
student from completing the course and the remaining work can be completed the next semester. Your instructor is the final authority on whether you qualify for an incomplete. Incomplete work must be finished by the end of the subsequent semester or the “I” will automatically be recorded as an “F” on your transcript.

**Group Work Policy:**
Everyone must take part in group clinic/lab experiences. Once assigned, groups cannot be altered or switched, except by the course instructor.

**XVII. Course Policies: Technology and Media**

**Email:** It is expected that students will check email and Sakai at least twice daily for updated information, assignments, and adjunctive reading. Student inquiries via email will generally be responded to **Mondays through Thursdays until 5 p.m.**

**Laptop Usage:** Is not required for this course. Should you elect to bring a laptop to class, it is to be used solely as an adjunctive learning device for this course. **Should laptop use interfere with participation, learning, or cause distraction or disruption of other students learning, you will be asked to refrain from bringing it to class.** Laptops will not be open or otherwise used during presentations by students or guest speakers.

**Classroom Devices:** Electronic devices, such as cell phones, calculators, will **not be allowed** in class, unless approved by the course director. All cell phones must be turned off and will be collected prior to lecture. Cell phones may be retrieved and accessed during rest breaks **outside** the classroom only. Tape recorders are allowed for the purpose of recording lecture material only.

**XVIII. Course Policies: Student Expectations**

**Disability Access and Non-Discrimination Statement** - The University of the Pacific is committed to the goal of providing qualified students an equal opportunity to attain college education regardless of disability. To reach that goal, Pacific will make efforts towards meeting reasonable requests for services and accommodations to students with disabilities. To that end, please notify me about any special needs you may require during the first weeks of the semester. Students requesting accommodations due to a disability should provide me with an accommodations request letter from the Office of Services for Students with Disabilities, Bannister Hall, Room 101, (209) 946-2879, E-mail: ssd@uop.edu, website: [http://www.uop.edu/education/ssd](http://www.uop.edu/education/ssd).

**Accommodations for students with disabilities**
In compliance with the University policy and equal access laws, I am available to discuss appropriate academic accommodations that may be required for student with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester, except for unusual circumstances, so arrangements can be made. Students are encouraged to register with Student Disability Services to verify their eligibility for appropriate accommodations.

**Students with Learning Disabilities:** If you are registered with the Educational Resource Center as having a learning disability, you may decide to take advantage of accommodations the University can provide. To preserve student confidentiality, please discuss such accommodations with the instructor.

“The University of the Pacific is committed to providing access for qualified students, faculty, staff, and visitors to University programs. This non-discrimination policy applies to all qualified applicants or students who seek to or do participate in employment, in access to facilities, student programs, activities and services.” The Educational Resource Center offers a variety of services for Pacific students with disabilities. These services may include, but are not limited to, extended time for completing exams, alternative testing procedures, note takers, and transportation to and from classes.

Attendance Policy:

- Attendance and promptness are mandatory.
- Excused absences for medical reason must be confirmed with the Program Director
- **Unexcused absences may result in a reduction in your grade for the course.**
- If it is necessary to miss a class period due to illness, it is the student’s responsibility to obtain notes and assignments from another student.
- Make-up examinations (Midterm and Final exam only) are to be completed upon return to school.
- Failure to do this within the allotted time will result in NO grade for that exam.
- Tardiness: To extend courtesy to the faculty and your classmates, it is expected that you arrive promptly for class and be prepared to participate in all activities and discussions.
- Attendance: Attendance is critical in order to obtain knowledge for patient care. Please notify Jeanne Swift at (209.946.7477) if you are unable to participate in class due to illness and or family emergency.
- Timed quizzes or exams will be administered at the beginning of each class session as indicated on the course schedule.
- Religious Observances cited in the handbook will be followed.

**Professionalism Policy:** Per university policy and classroom etiquette; mobile phones, iPods, etc. **must be silenced** during all classroom and lab lectures. Those not heeding this rule will be asked to leave the classroom/lab immediately so as to not disrupt the learning environment. **Please arrive on time for all class meetings and plan to remain in the classroom/clinic for the entire time.** It is expected that meal/restroom needs be attended to prior to or after class/clinic. Students who habitually disturb the class by talking, arriving late, entering/exiting the classroom _etc._, and have been warned may suffer a reduction in their final class grade.

**Professionalism Points: 10**

- **2 points-Professional attitude and ethical behavior** toward all patients, instructors, staff and peers is _mandatory_.
  - Unprofessional or harmful behavior/conduct involving a patient/classmate will be significantly reflected in your grade.
- **2 points-Punctuality:** Consistently arriving on time to classes and clinic. Attendance will be taken.
- **2 points-Participation** in required classroom assignments, discussions and projects.
- **2 points-Preparedness:** The student is responsible for bringing all required texts, skulls, armamentarium, personal protective equipment, and necessary supplies to class and clinic.
- **2 points-Proper attire:** attending classes in adherence with the dress code (including grooming). Clinic attire is mandatory in class and clinic. The Dress code will be strictly enforced.
**Academic Conduct Policy:** University 11.24 Honor Code - Approved by the Faculty in 1958

Established in 1958, the Honor Code is intended to maintain and preserve the high standards of personal character and integrity vital in academic pursuits. The success of the Honor Code is made possible only with the acceptance and cooperation of every student. Each student is expected to maintain the principles of the Code. A violation of the Honor Code may occur in one of the following areas:

- Giving or receiving information from another student during an examination;
- Using unauthorized sources for answers during an examination;
- Illegally obtained test questions before the test;
- Any and all forms of plagiarism;
- The destruction and/or confiscation of school and/or personal property.

A violation is reported either to the professor involved, who will report it to the Dean of Students, or to the Dean of Students. Circumstances warranting, alleged violations are referred by the Dean of Students to the Joint University Judiciary for appropriate action.

Example: Every student must read, understand and observe the UNIVERSITY HONOR CODE (Tiger Lore, Section 1.1 – 1.3); it is a violation of the Honor Code to submit all or part of someone else’s work or ideas as your own. Violations of the Honor Code are serious. They harm other students, your professor, and the integrity of the University. Alleged violations will be referred to the Office of Judicial Affairs. If found guilty of plagiarism, a student might receive a range of penalties, including failure of an assignment, failure of an assignment and withholding of the final course grade until a paper is turned in on the topic of plagiarism, failure of the course, or suspension from the University. If you have questions about plagiarism and other departures from the right way of conducting yourself in academic situations, speak with your professor. For more information about Pacific’s academic dishonesty policy, consult the Tiger Lore.

Violations of Academic Integrity - Violations of the principle include, but are not limited to:

- **Cheating:** Intentionally using or attempting to use unauthorized materials, information, notes, study aids, or other devices in any academic exercise. This definition includes unauthorized communication of information during an academic exercise. Fabrication and Falsification: Intentional and unauthorized alteration or invention of any information or citation in an academic exercise. Falsification is a matter of inventing or counterfeiting information for use in any academic exercise. Multiple Submissions: The submission of substantial portions of the same academic work for credit (including oral reports) more than once without authorization.

- **Plagiarism:** Intentionally or knowingly presenting the work of another as one’s own (i.e., without proper acknowledgment of the source). The sole exception to the requirement of acknowledging sources is when the ideas, information, etc., is common knowledge. Abuse of Academic Materials: Intentionally or knowingly destroying, stealing, or making inaccessible library or other academic resource materials. Complicity in Academic Dishonesty: Intentionally or knowingly helping or attempting to help another to commit an act of academic dishonesty. Plagiarism includes, but is not limited, to the following:
  - Copying or borrowing liberally from someone else’s work without his/her knowledge or permission; or with his/her knowledge or permission and turning it in as your own work.
Copying off of someone else’s exam or paper with or without his/her knowledge (aka Cheating)
- Allowing someone to turn in your work as his/her own
- Not providing adequate references for cited work
- Turning in someone else’s work and calling it your own
- Copying and pasting large quotes or passages without properly citing them

**University Writing Center:**

The University Writing Center is a free resource for students, where a trained writing consultant will work individually with you on anything you are writing (in or out of class), at any point in the writing process from brainstorming to editing.

Student work may be retained to assess how the learning objectives of the course are being met.

**XIX. Schedule  * Note: The Schedule is subject to revision**

It is mandatory that Skulls and Bassett, et al. text be brought to every class and clinic session. Clinic treatment areas are to be set up in advance on days of partner injections.
<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Topic</th>
<th>Preparation/Reading</th>
<th>Armamentarium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Class</td>
<td>Introduction, Expectations, Participant Responsibilities, Scope of Practice</td>
<td>Bassett, et al: Chapters 1,2</td>
<td></td>
</tr>
<tr>
<td>Week 2</td>
<td>Class</td>
<td><strong>1:00 - Quiz 1 (Week 1 information/reading)</strong></td>
<td>Bassett, et al: Chapters 5-8, DVD or YouTube*</td>
<td>Bring both syringes for engraving, recap cards, Cotton Forceps, PPE, probe</td>
</tr>
<tr>
<td>Week 3</td>
<td>Class</td>
<td><strong>Quiz 2 (Week 2 information/reading)</strong></td>
<td>Bassett, et al: Chapter 17, DVD or YouTube*</td>
<td></td>
</tr>
<tr>
<td>Week 4</td>
<td>Class</td>
<td><strong>Quiz 3 (Week 3 information)</strong></td>
<td>Practice on chicken legs</td>
<td></td>
</tr>
<tr>
<td>Week 5</td>
<td>Class</td>
<td><strong>Exam (weeks 1-4)</strong></td>
<td>Bassett, et al: Chapter 12</td>
<td></td>
</tr>
<tr>
<td>Clinic</td>
<td></td>
<td>Local Infiltration on partner (LI)</td>
<td>DVD or YouTube*</td>
<td>Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe, etc. — See Tray Set-up Photo</td>
</tr>
</tbody>
</table>

DH 124 Pain Management  
Paula Watson, R.D.H.A.P., M.S  
Summer 2016
<table>
<thead>
<tr>
<th>Week</th>
<th>Class</th>
<th>Clinical Procedure</th>
<th>Reading</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td></td>
<td>Infraorbital (IO) &amp; Posterior Superior Alveolar (PSA)</td>
<td>Bassett, et al: Chapter 12 DVD or YouTube*</td>
<td>Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe, etc. – See Tray Set-up Photo</td>
</tr>
<tr>
<td></td>
<td>Clinic</td>
<td>Infraorbital (IO) &amp; Posterior Superior Alveolar (PSA) on partner</td>
<td>Bassett, et al: Chapter 12 DVD or YouTube*</td>
<td>Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe, etc.</td>
</tr>
</tbody>
</table>
| 7    |       | **Quiz 4 (Week 6 information/reading)**  
Anterior Middle Superior Alveolar (AMSA), Palatal Considerations - Greater Palatine (GP) | Bassett, et al: Chapter 12,13 DVD or YouTube* | Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe, etc. – See Tray Set-up Photo |
|      | Clinic| Greater Palatine (GP), ASA, MSA on partner | Bassett, et al: Chapter 13 DVD or YouTube* | Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe, etc. | See Tray Set-up Photo |
| 8    |       | **Quiz 5 (Week 7 information/reading)**  
Nasopalatine (NP), Palatal Anterior Superior Alveolar (P-ASA) | All previous readings, calculations, and cumulative experience learned thus far | Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe, etc. – See Tray Set-up Photo |
|      | Clinic| Anterior Middle Superior Alveolar (AMSA) GP, PSA on partner | Bassett, et al: Chapter 13 DVD or YouTube* | Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe, etc. | See Tray Set-up Photo |
| 9    |       | **Quiz 6 (Week 8 information/reading)**  
Mandibular Local anesthesia considerations  
Inferior alveolar (IA), Lingual (L), Long Buccal (LB) | Bassett, et al: Chapter 13 DVD or YouTube* | Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe, etc. – See Tray Set-up Photo |
<p>|      | Clinic| Nasopalatine (NP), IO and Local Infiltration on partner | Bassett, et al: Chapter 13 DVD or YouTube* | Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe, etc. | See Tray Set-up Photo |
| 10   |       | <strong>Exam (weeks 6-9)</strong> | Bassett, et al: Chapter 14 DVD or YouTube* | Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe, etc. | See Tray Set-up Photo |
|      | Clinic| Inferior alveolar (IA), Lingual (L), Long Buccal (LB), Mental | Bassett, et al: Chapter 14 DVD or YouTube* | Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe, etc. |</p>
<table>
<thead>
<tr>
<th>Week 11</th>
<th>Class</th>
<th>Quiz 7 (Week 10 information/reading)</th>
<th>Mandibular Local Anesthesia considerations</th>
<th>Gow-Gates (G-G), Mental, Incisive, Intraseptal</th>
<th>Bassett, et al: Chapter 14 DVD or YouTube*</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic</td>
<td></td>
<td>Gow-Gates (G-G) and Mental on partner</td>
<td></td>
<td></td>
<td>Bassett, et al: Chapter 14 DVD or YouTube*</td>
<td>Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe, etc. – See Tray Set-up Photo</td>
</tr>
<tr>
<td>Week 12</td>
<td>Class</td>
<td>Quiz 8 (Week 11 information/reading)</td>
<td>Fundamentals of Pain/Anxiety Management</td>
<td></td>
<td>Clark, Morris &amp; Brunick Text Handouts – All Bassett, et al: Chapter 21 DVD or YouTube*</td>
<td></td>
</tr>
<tr>
<td>Class</td>
<td></td>
<td>Nitrous Properties</td>
<td>Patient assessment considerations</td>
<td>Signs and Symptoms Documentation</td>
<td>Clark, Morris &amp; Brunick Text Handouts – All Bassett, et al: Chapter 21 DVD or YouTube*</td>
<td></td>
</tr>
<tr>
<td>Week 13</td>
<td>Clinic</td>
<td>Troubleshooting LA, Legal Considerations, Recent/Future Trends Prepare for 1st Inductions</td>
<td></td>
<td></td>
<td>Bassett, et al: Chapter 16 DVD or YouTube*</td>
<td></td>
</tr>
<tr>
<td>Clinic</td>
<td></td>
<td>Nitrous oxide administration with AMSA, Intraseptal and Incisive on partner</td>
<td></td>
<td></td>
<td></td>
<td>PPE – Be ready to start promptly at your appointed time Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe</td>
</tr>
<tr>
<td>Week 14</td>
<td>Class</td>
<td>Review for exam</td>
<td></td>
<td></td>
<td>DVD or YouTube*</td>
<td></td>
</tr>
<tr>
<td>Clinic</td>
<td></td>
<td>Nitrous oxide administration with NP, P-ASA, Gow Gates on partner</td>
<td></td>
<td></td>
<td>DVD or YouTube*</td>
<td>PPE – Be ready to start promptly at your appointed time Syringe, recap cards, PPE, Typodont, Cotton Forceps, Probe</td>
</tr>
<tr>
<td>Week 15</td>
<td>Class</td>
<td>N,O/O, Sedation Comprehensive Exam</td>
<td>All information, readings, calculations, and cumulative N,O/O, experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinic</td>
<td></td>
<td>IA/L, LB, Mental, NP, P-ASA on partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*YouTube – Malamed videos only
Instructor Goals – As students are generally expected to aspire to established goals during the course of their education, I also aspire to provide students with a high-quality educational experience. In order to accomplish this goal, I have set my aspirations as follows:

Communicate effectively and frequently with students. Strive to involve students in class activities.
Be an enthusiastic, involved teacher. Foster an environment conducive to critical thinking.
Demonstrate a mastery of the discipline. Be reasonably available to assist students in or out of class.
Relate material to current practices. Share a mutual respect with all students.
Clearly explain complex concepts and ideas. Provide a framework for lifelong learning.

Strive to pique curiosity