

WEST LOS ANGELES COLLEGE  
DEPARTMENT OF DENTAL HYGIENE

- I. DH 150: (Section 7033) PREVENTIVE DENTISTRY
- II. PREPARED BY: Lisa Kamibayashi, R.D.H., M.S.D.H.
- III. REVISED FOR: FALL 2013
- IV. PREREQUISITES: COMPLETION OF ALL DENTAL HYGIENE COURSES WITH A FINAL GRADE OF "C" OF BETTER
- V. UNITS AND INSTRUCTORS: TWO UNITS, Total 36 hours lecture, 15 Weeks  
Wednesday 10:20 to 12:30
- VI. COURSE INSTRUCTOR: LISA KAMIBAYASHI R.D.H., M.S.D.H.  
E-MAIL: [mrskamiba@gmail.com](mailto:mrskamiba@gmail.com)  
\*Reply will be made within 48 hours. Usually not available to reply during evening hours and weekends.
- OFFICE HOURS: Monday 10:00 to 12:00 p.m.

VII. COURSE DESCRIPTION:

This course provides the fundamentals for the clinical application of primary preventive dentistry procedures. Content centers on the strategies to prevent plaque diseases and the skills required for effective patient education and motivation.

VIII. REQUIRED TEXT:

Darby, Michele L., Walsh, Margaret M. Dental Hygiene Theory and Practice 3<sup>rd</sup> Edition. Elsevier, 2010. (ISBN #978-1-4160-5357-6)

Perry, Dorothy, Beemsterboer, Phyllis, and Esse, Gwen, Periodontology for the Dental Hygienist, 4th Edition, St. Louis, MO, 2013 (ISBN #978-1-4557-0369-2)

Student Learning Outcomes addressed in this course:

- A. Critical Thinking: Analyze problems by differentiating fact from opinions, using evidence, and using sound reasoning to specify multiple solutions and their consequences.  
Assessment: Students will complete an evidenced based brochure on a topic related to preventive dentistry.
- B. Communication: Effectively communicate thought in a clear, well-organized manner to persuade, inform, and convey ideas in academic, work, family and community settings.  
Assessment: Students will present a research finding to class orally and create a brochure for the patient.
- C. Quantitative Reasoning: Identify, analyze, and solve problems that are quantitative in nature.  
Assessment: Students will be able to calculate the fluoride consumption to figure out the proper management to prevent fluoride overdose.
- F. Technical Competence: Utilize the appropriate technology effectively for informational, academic, personal, and professional needs. Use competent technique in a musical performance.

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Assessment: Students use internet for searching about oral hygiene products, finding current articles on a research topic.

H. Ethics: Practice and demonstrate standards of personal and professional integrity, honesty and fairness; apply ethical principles in submission of all college work.

Assessment: Students present an original research brochure without plagiarism.

Program Competencies Addressed in this course:

**SLO #3**: Understand and interpret the scientific literature and research as it relates to the evidenced-based practice of dental hygiene.

**SLO #4**: Utilize current technology to enhance education, patient care, research and professional growth.

**SLO #6**: Provide planned educational services using effective interpersonal communication skills and educational strategies to promote oral health for individuals and groups of diverse populations.

**SLO #7**: Promote the values of oral health, general health and wellness in individuals and populations with identified risk factors and develop strategies that promote health-related quality of life.

**SLO #12**: Apply problem solving strategies and critical thinking to insure comprehensive oral health care for individuals, groups, and communities.

Course SLO	Criterion Level
1. Develop and evidence-based research paper and brochure on a topic related to preventive dentistry.	At least 80% of students will score above 75% of the points on the grading rubric.
2. Effectively participate in a role-playing demonstrating a comprehensive understanding of preventative dentistry.	At least 80% of students will score an average of 5 points on a 10 point rubric.
3. Calculate fluoride consumption levels in order to figure out the proper management to prevent fluoride overdose.	At least 80% of students will correctly answer 75% or more of the calculations.
4. Successfully use the internet for searching for oral hygiene products to find current articles on a research topic.	Each question will be answered correctly by 75% of students.

#### X. COURSE OBJECTIVES

Upon completion of this course, the student will be able to:

1. List and describe the three levels of preventive dentistry.
2. Describe the role and formation of biofilm in dental caries and periodontal disease.
3. Name the primary and secondary bacterial colonizers of dental plaque biofilm.
4. Compare and contrast the various strategies to prevent plaque diseases and objectives of the patient education process.
5. Explain the philosophy of tooth brushing and describe the technique, advantages and disadvantages of all aids.
6. Demonstrate and select proper technique of brushing.
7. State the effects of improper tooth brushing on the gingiva and teeth and explain corrective measures.
8. Describe toothbrush design and technique, compare and contrast different tooth brushing techniques.

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9. Demonstrate and select proper technique of flossing, and other interdental cleaning aids to different types of patient.
10. Explain the chemical components of mouth rinse and dentifrice and their use for oral care.
11. List the ingredients found in a fluoride dentifrice and state how effectiveness is measured.
12. State the four basic methods of fluoride administration
13. Describe the metabolic and toxic components of fluoride in the human system.
14. Describe the various modes of application available for topical fluoride administration.
15. Identify and describe the various types of topical fluorides as to characteristics, advantages and disadvantages.
16. Describe as for a typical patient how fluoride can prevent dental caries.
17. Describe how the proper dosage of fluoride supplements is determined and give the effectiveness rates for preschoolers and school-children.
18. Explain the penetration process of fluoride into the tooth surface during systemic and topical fluoride uptake.
19. Identify the advantages and disadvantages of the various fluoride dietary supplements.
20. Explain the relevance of multiple fluoride therapy for caries prevention.
21. Discuss the effect of fluoride in diseases other than dental caries.
22. Describe the sites of dental caries and list the options available for dealing with potential lesions.
23. List the clinical advantages and disadvantages of pit and fissure sealants.
24. List the criteria for selecting teeth for sealant patient.
25. State the essential requirements for maximum retention of sealants in teeth.
26. Describe the hygienist's role in placement and monitoring of the retention of sealants.
27. Discuss the steps of smoking cessation program and the available therapies.
28. Identify health related factors beyond our control and health related factors that the individual can control.
29. Analyze the three-day diet diary and identify the cariogenic diets and its exposure.
30. Identify the risks associated with caries and periodontal diseases.
31. Plan an oral hygiene care regimen for pediatric, geriatric and special population patients.
32. Discuss the rationale for modification of plaque control programs to meet specific patient needs.
33. Identify patient situations, which may hinder compliance in patient education.
34. Discuss the dental hygienist's role in overcoming various patient education problems such as anxiety or stress.
35. Discuss the professional-patient relationship and its effects on patient education and motivation.
36. Identify and discuss the steps in the health behavior intervention process.
37. Explain the principles of behavior modification that are relevant to teaching preventive dentistry.
38. Explain the motivational level of specific need with various dental patients and explain the relationship between motivation and learning.
39. State the primary behavior modification goal of plaque control and discuss a hygienist's responsibilities to patients regarding plaque control.
40. Describe evaluation of dexterity, and implications of age and disease in the approaches selected for homecare instruction.
41. Synthesize the research findings and conclude the clinical application of the findings.
42. Compose a professional brochure for educating the public.

XI. METHODS OF INSTRUCTION:

Lecture and discussion  
Readings and research  
Student presentation

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XII. METHODS OF EVALUATION:

1. Passing grade of "C" (70%) or better on **the written midterm examination**. (25 %)
2. Passing grade of "C" (70%) or better on **the written accumulative final examination** (40 %)
3. **Evidence Based "Public Education Brochure" and Presentation** (15 %) See below for the detail.
4. **2 Quizzes** (10%)
5. **Weekly Homework Assignment** (10 %)

**Evidenced Based Educational Brochure**

The evidence based decision making has been become a common practice in field of medicine and dentistry for patient care. Because there are so many options and opinions, you and your patient may have difficulty making the best decision. For quick, clear, and safe decision can be made by using the good scientific evidences and clinical experiences. This project will help you start practicing the evidence based decision making for your patient care in the future.

One or two students can work together on this assignment. Students select a topic from the list below. The topics are selected from the current issues in preventive dentistry and questions asked by patients frequently during patient treatment.

There are two parts in this assignment.

**PART I: Oral Presentation for Dental Professionals**

For oral presentation, the time limit for each topic is 10 minutes. Use effective visual aids such as PowerPoint Presentation, or videos, or posters or supplemental aids to present your topic and findings to class. The audience is your classmates who should know the topic matter. Make sure to present something new and interesting for the class.

The presenters must submit a list of references used for the project. **At least three** current (within 5 years) professional research articles must be included to support the findings and recommendations.

**PART II: Brochure Presentation for Public**

A pair of students will complete a colored brochure and make 26 black and white copies for your classmates and an instructor. This brochure should be made for patient use. Use layman's term and make a professional looking brochure. Make sure to list all the references used (articles, textbooks, webpages, company brochure etc....) at the back page of the brochure with small fonts.

**Topics:**

1. **Electric toothbrushes**
2. **Fluoridated water**
3. **Topical fluoride (What types are available? Which one is better, varnish? rinse, or gel?)**
4. **Antimicrobial mouth rinses**
5. **Oral care during for Elderly or Incapacitated People (Immunocompromised Patients)**
6. **Dental Sealant**
7. **Smoking cessation**
8. **Xerostomia**
9. **Dentinal Hypersensitivity Prevention**
10. **Prenatal oral care/ oral care during pregnancy**
11. **Pediatric Oral Care (Age 0 to 12)**
12. **Halitosis Prevention**
13. **Variety of Caries Risk Assessment Tools**

**Due: Wednesday, November 27**

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Grading Policies, Class Policies and Procedures:

COURSE LETTER GRADE WILL BE BASED ON THE FOLLOWING SCALE:

- A (100 - 90%)
- B (80 - 89%)
- C (70 - 79%)
- D (60 -69 %)
- F (Below 59%).

A minimum grade of C is required to continue in the Dental Hygiene Program and earn Associate Degree in Dental Hygiene from West Los Angeles College.

1. Attendance is required at all sessions.
2. Tardiness and Unexcused absences will be handled in accordance with the West Los Angeles College's Attendance Policy. (More than two hours of tardiness or unexcused absence may cause withdrawal from the dental hygiene program.)
3. The classroom is a no-phone zone for more effective learning for everyone concerned. Texting during class will NOT be tolerated. Cell phones need to be turned OFF.
4. Any disruptive behavior may result in the exclusion from the class. (Please refer to "Standards of Student Conduct" Fall 2013 Schedule.)
5. Graded examination will be returned in one week after all students have taken them.
6. Mid-term and final examinations are the property of the instructor.
7. Copying questions from exam is an act of cheating.
8. Examination items are from the texts and lecture materials, assigned articles and handouts.
9. Plagiarism is an act of cheating. Please use references for any ideas, words, sentences, phrases, and paragraphs that you borrowed from other source.
10. Please make use of office hours. Your instructor is available for the discussion of all course materials during office hours and/or by appointment.
11. Special Instructional Accommodation: If there are special accommodations that you require to be successful in this course, please discuss your situation with the professor. To receive accommodations for a special need or disability, students must register with the Office of Disabled Student Program and Services, HLRC. Tape recording of lectures and discussions will not be permitted without the consent of the instructor.

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**Note: The schedule is tentative, therefore, subject to change depending upon the class progress. You are responsible for all the announcement and materials covered during your absence.**

<b>WEEK</b>	<b>DATE</b> Wednesday 130 min	<b>TOPIC</b>	<b>ASSIGNMENT</b>
1	8/28	Overview of the Course Primary Preventive Dental Concepts Dental Disease and Conditions	Darby: Chapter 3
2	9/4	Toothbrushes and Tooth brushing Methods Research topic assignment	Darby: Chapter 21 & 58 Perry: Chapter 12
3	9/11	Auxiliary Oral Hygiene Aids	Darby: Chapter 22
4	9/18	Dentifrices, Mouth Rinses, and Chewing Gums	Darby: Chapter 23 & 29
5	9/25	Topical Fluoride	Darby: Chapter 31
6	10/2	Systemic Fluoride	
7	10/9	<b>Quiz #1</b> Dentinal Sensitivity Pit-and-Fissure Sealants	Darby: Chapter 38
8	10/16	<b>MIDTERM EXAMINATION (2 hours)</b>	
9	10/23	Smoking Cessation	Darby: Chapter 34
10	10/30	CAMBRA, Risk Assessment, Nutritional Counseling	Darby: Chapter 16 & 33
11	11/6	Prenatal and Pediatric Oral Care	Dentalcare.com: Course # 54 Darby: Chapter 53 & 59
12	11/13	Preventive Oral Health Care for Geriatric, Disabled, Immunocompromised Patients and Xerostomia	Darby: Chapter 41, 44, 46, 50, 54
13	11/20	<b>Quiz #2</b> Health Education and Promotion Theories	Darby: Chapter 2, 3, 4, & 5
14	11/27	Research Presentation	<b>All brochures Due</b>
15	12/4	Research Presentation	
	Final Week	<b>FINAL EXAMINATION (2 hours)</b>	Will cover everything

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week	Due Date	DH 150 Weekly ASSIGNMENT: Assignments must be turned in as a hard copy. Preferred to be typed.
1	9/4	One week assignment: Obtain two NEW different kinds of toothbrushes. On your first day (today!), disclose your teeth before you brush your teeth and observe what you see. Then use one kind of toothbrush for the first 3 days and disclose your teeth after brushing. Take a photo of your disclosed teeth, and then indicate where you observe the disclosing solution. Describe place, color, shades etc... Then use the other kind of toothbrush for the rest of the week and continue to observe the findings. Submit a short report of your findings and what you discovered. We will discuss your findings in class.
2	9/11	Continue disclosing your teeth this week every night, but disclose only after you brush your teeth with different toothbrushing methods. Any difference? Do you feel different? Take a photo of your disclosed teeth. Submit a short report of your findings and what you discovered.
3	9/18	Continue to disclose your teeth after flossing and brushing or using an interdental aid. Make sure to clean interproximals before you brush. Taka a photo of your disclosed teeth. Submit a typed report of your journal about your week.
4	9/25	Do a window shop! You don't have to buy anything, just go to one of major drug stores (Rite Aid, CVS store, Walgreen) or discount stores (Target, K-mart, Wal-mart etc.) or Grocery stores (Ralphs, Vons, Albertson, <u>but not</u> natural store like Whole Foods, Trader Joe's or Sprouts). Visit their oral care isle and observe what they have. Spend at least 20 minutes! Please answer the questions below and write a summary report. Please do not take photographs in the store. It is illegal to take pictures in the store. Their merchandise is their property and taking a photo will be equal to copying their display scheme. If the store person asks you, tell them that you are a dental hygiene student and you are studying oral care products. <ul style="list-style-type: none"> <li>❖ Which store did you go? In which city?</li> <li>❖ Where was the dental section located? How did they display oral care products?</li> <li>❖ What brand is located on the top shelf? How about second one? Or bottom shelf? (Describe the display scheme).</li> <li>❖ Where are toothbrushes located? What their cost range?</li> <li>❖ Where are toothpastes located? What their cost range?</li> <li>❖ Where are flosses or interdental aids? What their cost range?</li> <li>❖ Where are mouthwashes? What are the active ingredients of different mouth wash?</li> <li>❖ Did you find any new products that you were not aware of? List all the products and we can discuss them in class.</li> <li>❖ Please describe your experience of this assignment. What was your thought?</li> </ul>
5	10/2	Go to Dentalcare.com. If you have not registered as a student, register now. Click Education Tab. Then click Student Corner. Find Continuing Dental Education Section. Then enter assignment #17383. <b>The course number: # 375.</b> Submit your course completion record.
6	10/9	Go to Dentalcare.com. Search for <b>course #340</b> (Strategies for searching the literature using PubMed.) No Assignment for the completion of the course. Let's start finding the articles for your presentation. Use PubMed and look for articles for your research topic. Find at least 3 abstracts that relate to your topic and submit the copies of those abstract.
7	10/16	No Assignment Due (Study for midterm exam!)
8	10/23	Interview a person who smokes or has smoked previously. Ask if they tried to quit. How they quit or tried to quit. What is hard about quitting? Are they aware of the effects of smoking on periodontium? Submit a report.

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<b>9</b>	10/30	Use CAMBRA risk assessment form (available in Google Drive). Assess caries risk on a person other than your classmate. Plan for the oral hygiene regimen and recommendations based on CAMBRA guideline.
<b>10</b>	11/6	Using worksheet provided in Google Drive, write down everything you consume for 3 consecutive days, including 1 weekend day. Do a carbohydrate analysis for yourself.
<b>11</b>	11/13	Go to Dentalcare.com: Complete <b>Course # 54</b> (Basic Techniques for Management of the Infant and Toddler Patient. Submit your assignment through Dentalcare.com.
<b>12</b>	11/20	Work on your presentation.
<b>13</b>	11/27	Your research brochure is due.
<b>14</b>	12/4	Start reviewing everything!