Course Change Request

1. School/Division: College of Health and Human Services

2. Academic Subject Code: DAST

3. Current Course Number: A141

4. Current Credit Hours: 2

5. Current Title: Preventive Dentistry & Nutrition

6. Effective Semester/Year for changes listed below: Fall, 2011

7. Instructor: C. Kracher

8. Change course number to: __________________________ (must be cleared with University Enrollment Services)


Change to: __________________________

(Limited to 32 Characters including spaces)

10. Current credit hours: Fixed at: 2 or variable from: ___________ to ___________

Change to credit hours fixed at: ___________ or variable from: ___________ to ___________

11. Current lecture contact hours fixed at: ___________ or variable from: ___________ to ___________

Change to lecture contact hours fixed at: ___________ or variable from: ___________ to ___________

12. Current non-lecture contact hours fixed at: ___________ or variable from: ___________ to ___________

Change to nonlecture contact hours fixed at: ___________ or variable from: ___________ to ___________

13. Is this course currently graded with S-F (only) grades? Yes ________ No ________

Change to S-F (only) grading? Yes ________ No ________

14. Does this course presently have variable title approval? Yes ________ No ________

Is variable title approval being requested? Yes ________ No ________

15. Is this course being discontinued? For all campuses ________ or for this campus only ________

16. Current course description

Change course description to (not to exceed 50 words)

17. Justification for change: Curriculum change: added lab and clinical exper. for the new Indiana law change

18. Are the necessary reading materials currently available in the appropriate library?

19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of this course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by: [Signature] Date: 3/15/10

Department Chairman/Division Director

Dean

Date: [Signature] Date: 5/25/10

Chancellor/Vice-President

Date

University Enrollment Services

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.

UWS 725 University Enrollment Services Final-White; Chancellor/Vice-President-Blue; School/Division-Yellow;
Department/Division-Pink; University Enrollment Services Advance-White
IPFW
College of Health and Human Services
Department of Dental Education
Dental Assisting Program

DAST A141
PREVENTIVE DENTISTRY & NUTRITION

Dr. Connie Kracher
DAST A141 Preventive Dentistry  
Spring, 2011

Days: Tuesdays 9:30-11:30 am  
Room: Neff 161

Dr. Connie Kracher  
Office: Neff 150B  
Ph: 260.481.6567  
Email: kracher@ipfw.edu

Prof. Deborah Stuart  
Office: NF 130F  
Ph: 260.481.6574  
Email: stuard@ipfw.edu

*Lectures, labs, and clinical syllabi are subject to change at the instructor's discretion.

COURSE DESCRIPTION
Through understanding the development of plaque and plaque-related disease, the student learns the basic philosophy involved in controlling and/or preventing oral diseases. Particular emphasis is placed on caries etiology, plaque, plaque control and patient education/motivation. Systemic fluoridation, pit & fissure sealants, toothbrushing techniques, auxiliary aids, mouth rinses, and dentifrices will also be discussed. Emphasis will be placed on the relationship between diet, dental caries, periodontal disease, and systemic diseases.

COURSE OBJECTIVES:
The student will:
1. Describe various aspects of patient motivation.
2. Explain the differences between primary, secondary, and tertiary preventive dentistry.
3. Discuss the relationship of plaque to caries and periodontal disease.
4. Compare and contrast various plaque control measures (chemical and mechanical).
5. Compare various aspects of patient education and describe the importance of individualizing patient education.
6. Explain the effects of pre-eruptive fluoride measures and explain and demonstrate post eruptive fluoride products in both the laboratory and clinical setting.
7. Explain the purpose and use of pit and fissure sealants.
8. Explain the importance of nutrition on systemic health, as well as oral health.
9. Demonstrate competent coronal polishing in both the laboratory and clinical setting

TEACHING METHODS:
PowerPoint presentations and ELMO visual presenter
Nutrition CDROM
Evidence-based Dentistry Research Studies

REQUIRED TEXTBOOKS/READING
2. Department Manual author – Kracher, PowerPoint lectures posted on Blackboard
3. Nutrition & Dentistry, Lolkus, CDROM
4. The Chairside Instructor Case Presentation Pictorial Guide (from your student kit)
   Note: bring this guide to class every week with your preventive dentistry textbook when we
discuss preventive dentistry

CRITERIA FOR EVALUATION:

Didactic
5 Preventive Dentistry Exams
2 Nutrition Exams

Laboratory
1 Coronal Polishing Laboratory Competency on laboratory simulator
1 Topical Fluoride Clinical Competency on student partner's maxillary arch
1 Fluoride Varnish Clinical Competency on student partner on mandibular arch

Prevention Clinic – Friday afternoons
12 Sealed Teeth on scheduled patients in the Prevention Clinic
1 Coronal Polishing Clinical Competency on a student partner in the Prevention Clinic
1 Flossing Competency on a student partner in the Prevention Clinic

The Key to Doing Well on Course Examinations
The examination questions are written based on the corresponding textbook chapters, my
PowerPoint notes, and additional information I give during my lectures. In addition, the nutrition
examination questions are also based on the nutrition CDROM units. The key to doing well on
examinations is to read the corresponding textbook chapters, read the PowerPoint notes along
with me as I lecture and then add more notes as I lecture. Students who missed examination
questions studied the PowerPoint notes, but did not read the corresponding textbook chapters
and/or didn't listen well in class. We are teaching you to be not only knowledgeable clinicians,
but to also be detailed clinicians. If you apply this philosophy to all of your courses, be it
didactic, lab, or clinic—you will do well.

Being Prepared for Examinations (studying and reviewing material)
I don't answer questions regarding exams on exam days. This makes me think students are not
prepared for the exam. Please email me at least 24 hours prior to exam days if you have
questions. I will be glad to clarify information you have read from your textbook readings or
lecture notes. Studying for exams should be completed days in advance. Plan out all of your
exams in advance—so you will do well. The day before the exam and the day of the exam should
be for reviewing material only.

Challenging Examination Questions
If you would like to "play attorney" and challenge exam questions by finding data in your
textbook or other empirical sources (peer-reviewed dental journals or other textbooks), please
email me your data. Be specific in your rationale and where you found your data. If I agree with
the data presented, everyone in the class receives credit for that question.
Lab Competencies:

1. The student will need to receive 88% on the written examination to start the laboratory competencies. If 88% is not achieved, the student will need to review the instruction and retake the written examination.

2. When the student passes the written examination, they may start the laboratory competency. The student will use simulators in the laboratory to pass the laboratory competency on their typodont.

3. After the student passes the competency on the laboratory simulator, the student will be paired with a student partner in clinic on Friday afternoon in the prevention clinic. The student will disclose their partner and complete the coronal polishing competency.

4. After completing the coronal polishing competency on a peer, the student will complete the fluoride competencies. The student will select and apply the appropriate topical fluoride for their partner’s maxillary arch and apply fluoride varnish on the mandibular arch. A competency will be completed for both forms of fluoride application.

Extramural Clinical Competencies:
The student will complete five coronal polishing patients and five fluoride application in their dental office extramurals. The dentist will sign off on the competency forms when they are completed. To meet Indiana dental law requirements a certificate will be given to the student indicating they have completed the course for future employment.

Point Deductions:
- Late to class -2 points
- Leaving class early -2 points
- Absent from class -5 points

Grading Scale:

<table>
<thead>
<tr>
<th>Points Possible</th>
<th>Grade</th>
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<tbody>
<tr>
<td>94 - 100%</td>
<td>A</td>
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<tr>
<td>88 - 93%</td>
<td>B</td>
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<tr>
<td>80 - 87%</td>
<td>C</td>
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<tr>
<td>75 - 79%</td>
<td>D</td>
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<tr>
<td>Below 75</td>
<td>F</td>
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PLEASE READ THE FOLLOWING SECTIONS THOROUGHLY.

Absence from Class:
If a student must miss a course session (clinic, laboratory, lecture, extramural experience, etc.) he/she must give the professor of the course notice prior to the course session/extramural experience to be missed. All examinations, practicals, and quizzes must be taken before the course meets again. Failure to do so will result in the student receiving a grade of zero for any/all
examination/s, practical/s and/or quizzes scheduled for the missed course session. Students will not receive credit for unscheduled/bonus quizzes. It is the student’s responsibility to contact the course instructor to schedule a time to make up missed course work. Any student who does not complete all course work by the end of the semester will receive an incomplete for that course. Only students who are passing this course are eligible for a grade of Incomplete. Students who miss a lecture must obtain missed lecture notes from a classmate.

Academic Dishonesty:
Professional, mature conduct is expected of all students. Any form of academic dishonesty is in direct conflict with professionalism and will result in a grade of F for the course and dismissal from the program. Please see the IPFW student handbook for the university policy regarding academic dishonesty. The Dental Education Programs choose the most stringent course of action regarding dishonesty, i.e. dismissal from the program. There are no exceptions to this rule. Dental healthcare professions follow strict codes of ethical and moral conduct.

Professionalism:
The practice of dental assisting carries with it a high degree of responsibility. Mature, professional, and ethical conduct is expected of all students at all times.

Dental Assisting Program Professionalism Deductions
Professional, mature conduct is expected of all students at all times. A student who demonstrates unprofessional behavior will have percentage points deducted from didactic, labs, and/or clinics). One percent grade reduction (1%) per incident will be deducted at the discretion of Dr. Kracher – when unprofessional behavior occurs. Examples of deduction could include, but not limited to, excessive talking in class, cell phone disturbances, coming to class without necessary items taking extended breaks, arguing with classmates, faculty, or patients, being disrespectful of others in the classroom, labs, or clinics, etc.

Cell Phone Usage:
With more and more technology available to college students, the health professions such as dental and medical schools are forced to change their policies regarding cell phone usage in the classroom. The allied dental education programs are adopting similar policies. In this course, cell phones will be collected at the beginning of class on exam days in a bin and returned after class. This is to prevent potential cheating. If a student is caught using their cell phone (i.e. texting) during class on non-exam days, they will have 1% deducted from their final grade for each occurrence. I recommend you leave it in your locker and check it between classes so you do not drop a letter grade. In dental offices it is common practice for dental professionals to keep their cell phone in their locker and check it at lunch. We know of employees (graduates) that have been fired because they were on their cell phone or used the internet. Good habits start now.

DISABILITIES STATEMENT: If you have a disability and need assistance, special arrangements can be made to accommodate most needs. Contact the Director of Services for Students with Disabilities (Walb, room 113, telephone number 481-6658), as soon as possible to work out the details. For more information, please visit the web site for SSD at http://www.ipfw.edu/ssl/
**Speaker Protocol:**
When we have guest speakers, please be sure to be professional giving positive verbal and nonverbal cues. This includes: looking at the speaker, head nodding, smiling, and asking questions. Heads cannot be down on the desk and students cannot be talking. Students will receive a 1% grade reduction for unprofessional misconduct -- per incident.
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>January 11</td>
<td>Course Introduction</td>
</tr>
<tr>
<td></td>
<td><em>Primary Preventive Dentistry Textbook</em></td>
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<tr>
<td></td>
<td>Prof. Stuart --- Chapter 13 - Dental Sealants</td>
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<tr>
<td>January 15</td>
<td>Sealant Lab with Prof. Stuart (NF 161)</td>
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<tr>
<td>1-5 pm</td>
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<tr>
<td>January 18</td>
<td><em>Primary Preventive Dentistry Textbook</em></td>
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<td></td>
<td>Chapter 1 - Introduction to Primary Preventive Dentistry</td>
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<td>Chapter 17 - Health Education and Promotion Theories</td>
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<tr>
<td>January 25</td>
<td>Exam #1 Preventive (Chapters 1, 13, 17)</td>
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<td></td>
<td><em>Primary Preventive Dentistry Textbook</em></td>
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<td></td>
<td>Chapter 2 - Dental Plaque</td>
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<tr>
<td>February 1</td>
<td><em>Primary Preventive Dentistry Textbook</em></td>
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<td></td>
<td>Chapter 3 - Carious Lesions</td>
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<tr>
<td>February 8</td>
<td>Exam#2 Preventive (Chapters 2, 3)</td>
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<td></td>
<td><em>Primary Preventive Dentistry Textbook</em></td>
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<td></td>
<td>Chapter 4 - Periodontal Diseases</td>
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<tr>
<td>February 15</td>
<td><em>Primary Preventive Dentistry Textbook</em></td>
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<td></td>
<td>Chapter 8 - Toothbrushes and Toothbrushing Methods</td>
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<td><strong>Note</strong>: bring <em>typodont model</em></td>
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February 22
Exam #3 Preventive (Chapters 4, 8)
*Primary Preventive Dentistry Textbook*
Chapter 10 - Self-Care Measures to Supplement Toothbrushing

March 1
**Webinar with Janette Delinger**, the Midwest Professional Education representative from Philips
(I will have a form available for you to complete so she can send you a free FlexCare Sonicare with UV Sanitizer. You are also eligible to purchase additional Sonicare Flexcare’s at a reduced price. I will email you the flyer when I receive it from Janette)
*Primary Preventive Dentistry Textbook*
Chapter 10 - Self-Care Measures to Supplement Toothbrushing cont…
**Note: bring typodont for flossing competency review**

March 8
Spring Break – no classes

March 15
*Primary Preventive Dentistry Textbook*
Chapter 9 - Dentifrices, Mouthrinses and Chewing Gum

March 22
Exam #4 Preventive (Chapters 9, 10)
*Primary Preventive Dentistry Textbook*
Chapter 11 – Community Water Fluoridation
Chapter 12 – Topical Fluoride Therapy

March 29
Exam #5 Preventive (Chapters 11, 12)
Nutrition Lecture
Nutrition in Dentistry – CDROM
Complete Units 1 and 2
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 5</td>
<td>Nutrition Lecture&lt;br&gt;Nutrition in Dentistry – CDROM&lt;br&gt;Complete Units 3 and 4</td>
</tr>
<tr>
<td>April 12</td>
<td>Nutrition Lecture&lt;br&gt;Nutrition in Dentistry – CDROM&lt;br&gt;Complete Units 5 and 6</td>
</tr>
<tr>
<td>April 19</td>
<td><strong>Exam #6 Nutrition (lectures March 29 – April 12)</strong>&lt;br&gt;Nutrition Lecture&lt;br&gt;Nutrition in Dentistry – CDROM&lt;br&gt;Complete Units 7 and 8</td>
</tr>
<tr>
<td>April 26</td>
<td>Nutrition Lecture&lt;br&gt;Nutrition in Dentistry – CDROM&lt;br&gt;Complete Units 10, 13, 14, 15</td>
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<tr>
<td>May 2-6</td>
<td><strong>Finals Week - TBA</strong>&lt;br&gt;<strong>Exam #7 Nutrition (lectures April 19-26)</strong></td>
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</table>
DAST A141 Preventive Dentistry Instructional Objectives

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

INTRODUCTION TO PRIMARY PREVENTIVE DENTISTRY:
1. Define the following terms: health, primary prevention, secondary prevention and tertiary prevention and give specific examples.
2. Name four convenient categories that aid in classifying dental disease and in planning oral health preventive and treatment programs.
3. Name five general approaches to prevention of dental caries or periodontal disease.
4. Cite two early actions that are essential to arrest the progression of disease once primary preventive measures have failed.
5. Analyze and explain why effectively plaque control programs can prevent periodontal disease, yet be effective in preventing 50% of the carious lesions.
6. Explain how the planned application of preventive dentistry concepts and practices now available, including dentistry concepts and practices now available, including remineralization, when coupled with early detection and immediate treatment of the plaque diseases, can result in a zero or near zero annual extraction rate.
7. Compare and contrast the five general areas (methods and techniques) in which plaque disease can be controlled.
8. Analyze and explain the four general categories that oral disease is grouped into.

UNDERSTANDING HUMAN MOTIVATION FOR BEHAVIOR CHANGE:
1. Discuss Bloom’s hierarchy of educational objectives in relation to patient education.
2. Explain how the learning ladder integrates attainment of educational objectives with patient motivation.
3. Discuss how value systems are developed.
4. Define motivation, and explain the difference between intrinsic and extrinsic motivation.
5. Name the components of the five-tier hierarchy of human needs, as proposed by the humanistic psychologist Abraham Maslow, and explain their relationship to motivation as affluence and learning levels improve.
6. Define adherence and discuss its importance in the development of a patient home care program.

DENTAL SEALANTS:
1. Explain how fissure sealants can provide a primary preventive means of reducing the need for operative treatment.
2. Explain the indications contraindications for fissure sealant placement.
3. Name the four commandments for maximum retention of fissure sealants on teeth.
4. Explain where sealants are placed & on which teeth.
5. Compare and contrast self-cure and light-cure methods of fissure sealant application.
6. Explain how to prepare teeth for sealant application.
7. Discuss corrective procedures to be taken in the event that excess fissure sealant material is dispensed onto the tooth.
8. Discuss the concept of adherence with regard to the conditioner, sealant material, fluoride and oil.
9. Identify a basic set-up for fissure sealant placement.
10. Explain precautions that must be taken when working with and applying conditioner.
11. Successfully apply sealants to twelve teeth on patients in the sealant clinic on Friday afternoons.

**DENTAL PLAQUE:**
1. Explain the origin of the glycoproteins making up the acquired pellicle, the basis for the specificity of their adherence to hydroxyapatite, and the difference between surface pellicle and the subsurface pellicle.
2. Describe the mechanisms for bacterial adherence to hydroxyapatite, to glucans, or to similar or dissimilar bacteria in the plaque.
3. Name the key primary and secondary bacterial colonizers of the dental plaque, and the differences in characteristics between these sequential colonizers.
4. Explain how calculus forms, its usual location, how it is attached to the teeth, and methods that have been attempted to inhibit its formation.
5. Analyze and explain the process of tooth development.
6. Compare and contrast the two classification of plaque with respect to its location and appearance.

**CARIOUS LESIONS:**
1. Explain the pathologic process of dental caries.
2. Name four general areas where coronal cavitation can occur.
3. Contrast the three primary factors that must occur simultaneously for caries development.
4. Identify two secondary factors that play a role in caries development.
5. Explain enamel composition and highlight its degree of mineralization.
6. Give a brief explanation of the porosity of demineralized versus remineralized enamel.
7. Explain the three distinct stages of cavitation.
8. Describe coronal caries topography into three categories.
9. Identify the most virulent odontopathogen.
10. Explain how adherence becomes a factor in caries development.

**PERIODONTAL DISEASES:**
1. List, locate, and describe briefly the function of each of the components of the periodontium.
2. Describe the difference between the junctional epithelium and the epithelial attachment, between the attached gingiva and free margin of the gingiva, and between the gingival sulcus and the sulcular epithelium.
3. Discuss some of the key characteristics of the normal crevice, of the developing lesion, and of the two parts of the subgingival plaque found in periodontal disease.
4. Differentiate between gingivitis and periodontitis, and name four different types of periodontitis of probable different microbial etiology.
5. Describe briefly the progress of periodontal disease from the time of bacterial invasion of the gingival sulcus until bone and connective tissues are involved.
6. Analyze and explain common misconceptions about what dental plaque is not.
7. Identify the characteristics that are dependent upon the formation of dental plaque.
8. Explain the factors affecting the pathogenic potential of plaque.
9. Categorize the five anatomical structures of the periodontium according to their function.
10. Identify factors that may have adverse affects on the anchoring function of the periodontium.
11. Compare and contrast the four cardinal symptoms of damage to tissue by bacterial end products.

TOOTHBRUSHES AND TOOTHBRUSHING METHODS:
1. Give a brief history of the toothbrush, describe its parts in detail, and explain why there is not one “ideal” brush for all situations.
2. Compare natural and nylon bristles for their uniformity of length, diameter, and durability.
3. Compare various toothbrush products for profile and diameter, shape, and firmness of bristles.
4. Compare techniques and effectiveness of manual and power toothbrushes.
5. Name, explain in detail, and evaluate the various methods that have been recommended for toothbrushing.
6. Explain why different amounts of time are needed by different individuals for toothbrushing and discuss how the effectiveness and safety to toothbrushing can be evaluated.
7. Discuss modification of toothbrushing techniques applicable to special patient care, prosthetic patients, and those under orthodontic care.
8. Identify the components of toothbrushing.
9. Compare and contrast the four basic motions or combination of bristle action.
10. Discuss the various methods of toothbrushing techniques including bristle positioning, brushing motion and claimed effect.

DENTIFRICES, MOUTHRINSES, AND CHEWING GUMS:
1. Name the general components of a dentifrice and give the usual percentage range of each.
2. Describe the functions of humectants, forming agents, binding agents, flavoring agents, sweetening agents, and coloring agents.
3. Identify agents that are being used or researched for inclusion in either or both dentifrices and mouthrinses for helping prevent caries, calculus, periodontal disease, and dentin hypersensitivity.
4. Explain how the Food and Drug Administration and the ADA can protect the consumer from misleading advertising for over-the-counter sales of dentifrices and mouthrinses.
5. Name the general components of a mouthrinse and explain the purpose of each type of agent; explain why the alcoholic content can be hazardous.
6. Discuss the advantages and disadvantages of different types of dental irrigators.
7. Compare and contrast intrinsic and extrinsic stains as to appearance, location, and treatment.

SELF-CARE MEASURES TO SUPPLEMENT TOOTHBRUSHING:
1. State the reasons interdental care is needed to complement toothbrushing.
2. Recognize and describe the anatomy and clinical appearance of normal and diseased interdental gingiva as a prerequisite for interdental cleansing and selection.
3. List the five objectives that interdental care should accomplish.
4. State the purposes, indications, contradictions, techniques, and problems for the selection of the following interdental cleansing aids: dental floss, dental floss holder, knitting yarn, pipe cleaner, gauze strip, interdental tip stimulator, wedge stimulator, toothpick, toothpick holder, interdental brush and swab, and tongue cleaner.
5. Describe the purpose and technique for rinsing of the mouth following meals, toothbrushing, and/or interdental cleaning.
6. Acquire a variety of interdental cleansing aids by obtaining the product name, manufacturer, and address located in Table 6-1.
7. Explain why gingivitis is most severe and most common in the interproximal areas.

COMMUNITY WATER FLUORIDATION:
1. Recall the historical discovery of naturally occurring fluoride and its dental effects.
2. Describe the causation and characteristics of dental fluorosis (mottled enamel) and its treatment.
3. Describe the numerous cost-health benefits of water fluoridation.
4. Outline the normal metabolism of the fluoride ion in humans.
5. Describe the causes of acute and chronic fluoride toxicity and the methods of treatment.
6. Describe the equipment, chemicals, and techniques used to fluoridate water.
7. Outline alternative methods of fluoride administration that are used in lieu of water fluoridation.
8. Discuss political objections to water fluoridation and elaborate on means to overcome these objections.
9. Describe artificial community water fluoridation.
10. Compare and contrast the period of enamel maturation and the pre-eruptive period of enamel maturation.
TOPICAL FLUORIDE THERAPY:

1. Indicate the three most accepted fluoride compounds now used to control caries and indicate their relative effectiveness.

2. Discuss the possible chemical reactions associated with the topical application of sodium fluoride (NaF), stannous fluoride (SnF2), and sodium monofluorophosphate (MPF).

3. Relate what percentage of NaF and SnF2 are available for office, school, and home use (as solutions or as gels).

4. Describe how a liquid or gel topical application of fluoride is applied to the tooth.

5. Name at least four fluoride dentifrices on the market and indicate why the early dentifrices did not produce expected caries decrements.

6. State the expected caries decrement following use of dentifrices, prophylaxis pastes, and mouthrinses containing fluoride.

7. Compare and contrast systemic and topical fluoride applications.