I. **OVERVIEW**

The following information will appear in the 2010 - 2011 catalog

**DTAST 372 Pit and Fissure Sealants** 0.5 Unit

**Prerequisite:** Satisfactory completion of DTAST 367.

**Limitations on Enrollment:** Dental assistant classes are limited to those admitted to the Dental Assistant program.

Tooth morphology and caries etiology will be reviewed to enhance the presentation of principles and application of pit and fissure sealants. This course meets the requirements for certification in Pit and Sealant Placement for California Dental Board.

**Materials Fee Required**

(P/NP Only) /Lab

II. **LEARNING CONTEXT**

Given the following learning context, the student who satisfactorily completes this course should be able to achieve the goals specified in Section III, Desired Learning:

A. **COURSE CONTENT**

1. **Required Content:**

2. **Required Lab Content:**

   a. Identify basic pit and fissure terminology, characteristics of tooth morphology, dental materials and microbiology.

   b. Explain the goals of pit and fissure sealants.

   c. Identify legal requirements associated with placement of pit and fissure sealants.

   d. Describe the role of sealant in preventive dentistry.

   e. Identify precautions taken to protect patient and operator during placement of pit and fissure sealants.

   f. Describe and identify armentaria used for preparation, placement and and finishing of pit and fissure sealants.

   g. Describe the steps in appropriate preparation, acid etching, sealant application and finishing on extracted/typodont/patient teeth according to stated criteria.

   h. Prepare, etch, appy and finish pit and fissure sealants on minimum four extracted/typodont teeth to 75% minimum proficiency.

   i. Prepare, etch, apply and finish pit and fissure sealants on four patients with four virgin, non restored posterior teeth - one in each quadrant to 75% minimum proficiency.

   j. Student, peer and instructor will evaluate sealant placement according to stated criteria and identify techniques necessary to improve or modify faulty sealant placement.

   k. Maintain infection control for patient and operator protection at all times according to OSHA and DBC.
Discuss clinical recall evaluation protocol for pit and fissure sealant application.

m. Complete written exam at 75% competency on principles of application of pit and fissure sealants.

B. ENROLLMENT RESTRICTIONS

1. Prerequisites
   Satisfactory completion of DTAST 367.

2. Limitations on Enrollment
   Dental assistant classes are limited to those admitted to the Dental Assistant program.

3. Requisite Skills
   Before entering the course, the student will be able to:
   a. Demonstrate adequate plaque removal with use of correct fulcrum, hand piece speed and prophy angle pressure/adaptation.
   b. Demonstrate proper patient and operator positioning.

C. HOURS AND UNITS

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D. METHODS OF INSTRUCTION (TYPICAL)
   Instructors of the course might conduct the course using the following method:

1. Lecture/powerpoint presentation provided on tooth morphology, caries etiology, and principles of application of Pit and Fissure Sealants.

2. Video demonstration of principles of application of Pit and Fissure Sealants.

3. Visual demonstration of principles of application of Pit and Fissure Sealants.

4. Hands on manipulation of materials in principles of application of Pit and Fissure Sealants. Practice on typodont will be self, peer and faculty evaluated.

5. Placement of Pit and Fissure sealant on patient using tooth selection criteria will be self, peer and faculty evaluated.

E. ASSIGNMENTS (TYPICAL)

1. EVIDENCE OF APPROPRIATE WORKLOAD FOR COURSE UNITS
   Time spent on coursework in addition to hours of instruction (lecture hours)

   Lab only with limited lecture(6 hours) delivered during lab sessions. Students will be expected to complete written examination(1 hour) to show competency in understanding of materials presented during lecture, manipulation and demonstrations before proceeding on with placement of Pit and Fissure Sealants on patients.
2. **EVIDENCE OF CRITICAL THINKING**

Assignments require the appropriate level of critical thinking

1. What might be responsible for the tooth not appearing frosty white after the placement of acid etchant?

2. If the tooth becomes contaminated with saliva after placement of the acid etchant, what procedure should be followed?

3. If the sealant does not adhere properly what might be the cause? What could be done to insure proper adhesion?

F. **TEXTS AND OTHER READINGS (TYPICAL)**


III. **DESIRED LEARNING**

A. **COURSE GOAL**

As a result of satisfactory completion of this course, the student should be prepared to:

place Pit and Fissure sealants to competency meeting California Dental Board requirements for certification.

B. **STUDENT LEARNING GOALS**

Mastery of the following learning goals will enable the student to achieve the overall course goal.

1. **Required Learning Goals**

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

2. **Lab Learning Goals**

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

   a. identify teeth that meet criteria for placement of pit and fissure sealants.

   b. apply infection control concepts for patient and operator safety necessary for placement of pit and fissure sealants.

   c. assemble armamentaria necessary for placement of pit and fissure sealants.

   d. prepare the teeth for placement for pit and fissure sealants.

   e. apply etchant to selected teeth following criteria for placement of etchant prior placement of pit and fissure sealants.

   f. place and light cure pit and fissure sealant material following proper criteria for placement of pit and fissure sealants.

   g. apply infection control concepts for patient and operator safety necessary for clean up following placement of pit and fissure sealants.

IV. **METHODS OF ASSESSMENT (TYPICAL)**

A. **FORMATIVE ASSESSMENT**

1. Evaluation of placement of acid etchant on extracted model/typodont teeth and identify characteristics of proper etch.
2. Evaluation of infection control protocol necessary for patient/operator safety

3. Evaluation of armamentarium (tools) selection to apply principles of placement of pit and fissure sealants.

4. Evaluation of preparation of selected teeth for placement of pit and fissure sealant.

5. Evaluation of student sequence required for placement of etchant on selected teeth.

6. Evaluation of demonstration of principles required for placement of pit and fissure sealant material on selected teeth.

7. Evaluation of infection control protocol necessary in patient/operator safety during clean up after procedure.

B. **SUMMATIVE ASSESSMENT**

1. Before applying pit and fissure sealants during clinical application on patients student will demonstrate knowledge by passing with 75% accuracy written exam on principles and criteria for placement of pit and fissure sealants.

2. Evaluation of student-demonstrated competency in placement of pit and fissure sealants on models/extracted teeth prior to patient placement.