

**Course Objectives;  
Basic Restorative for the EFDA or RDH  
OHSU Dental CE  
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**BACKGROUND KNOWLEDGE:**

**ANATOMY**

1. The student will be able to identify and differentiate individual characteristics of all permanent and primary dentition, including lobes, grooves, cusps and fossae.
2. The student will be able to define the following terms: marginal ridge, triangular ridge, transverse ridge, oblique ridge, fossa, developmental groove, embrasure and contacts.

**CLASSIFICATION OF CARIES AND PREPARATIONS**

1. The student will be able to define and classify carious lesions and cavity preparations (Class I,II,III,IV,V,VI).
2. The student will be able to identify the following components of prepared cavity walls; axial, distal, facial, gingival, lingual, mesial and pulpal wall.
3. The student will be able to identify and define the walls, line angles and point angles of all types of cavity preparation.
4. The student will be able to describe the steps involved in removing caries and creating a quality cavity preparation for restoration.

**ISOLATION TECHNIQUES:**

**RUBBER DAM**

1. The student will be able to identify the advantages, indications, and contraindications for rubber dam placement.
2. The student will be able to properly choose, apply, and remove the clamp and rubber dam to effectively isolate any area with minimal tissue trauma.

**MATRIX AND WEDGE**

1. The student will be able to list the purposes for using a matrix and wedge.
2. The student will be able to identify the armamentarium required and demonstrate the proper band, retainer and wedge selection, placement and removal.

**TISSUE RETRACTION**

1. The student will be able to explain gingival deflection.
2. The student will be able to identify methods of and armamentarium for retraction.
3. The student will be able to discuss reasons to use retraction.
4. The student will be able to describe the materials and chemicals used in retraction.
5. The student will be able to state the contraindications to hemostatic agents.
6. The student will be able to demonstrate the proper steps in tissue retraction.

## **SAFETY AND ASEPSIS:**

### **MATERIAL AND EQUIPMENT SAFETY**

1. The student will be able handling of mercury.
2. The student will be able
3. The student will be able exposure.
4. The student will be able
5. The student will be able restorative curing lights.

to discuss proper office and personal safety in the

to identify the modes of entry of mercury.

to list the effects of both chronic and acute mercury

to discuss proper treatment of mercury exposure.

to discuss proper techniques and safety when using restorative curing lights

## **DENTAL MATERIALS:**

### **AMALGAM**

1. The student will be able to name and identify the unique characteristics of at least four types of amalgam particle shapes.
2. The student will be able to discuss alloy components and their properties, including silver, tin, copper, zinc, palladium, indium, and mercury.
3. The student will be able to identify and differentiate the three different Gamma phases.
4. The student will be able to explain the trituration process and identify characteristics of improper trituration.
5. The student will be able to list the benefits of amalgam restorations.

### **COMPOSITE (RESIN) AND GLASS IONOMERS**

1. The student will be able to define the following terms: polymers, monomer, oligomer, Bis CMS, UDMA, TEGDMA and Free Radical.
2. The student will be able to discuss the properties of various resins and composites.
3. The student will be able to differentiate between properties of unfilled acrylic resins, nanofilled composites, microfilled composites, macrofilled composites, hybrid composites, small particle composites, resin-modified glass ionomers, and plain glass ionomers.

### **CAVITY SEALERS, LINERS AND BASES**

1. The student will be able to define the term sealer, liner, and base as they relate to cavity preparations.
2. The student will be able to list indications for placement of cavity sealers, liners and bases.
3. The student will be able to list trade names, uses, properties, and manipulation of varnishes.
4. The student will be able to list the trade names, uses, properties, and manipulations of Calcium Hydroxide.

5. The student will be able to list the trade names, uses, properties, and manipulation of Glass Ionomers.

6. The student will be able to identify the trade names, uses, properties and manipulation of the following dental cements: zinc oxide-eugenol, zinc phosphate, glass ionomer luting cements, resin luting cements.

#### **ADHESIVE SYSTEMS**

1. The student will be able to discuss the properties of enamel and dentin.

2. The student will be able to discuss the benefits and uses of adhesive systems.

3. The student will be able to distinguish between etch-and-rinse, self-etch adhesives, and glass ionomer adhesives.

4. The student will be able to list the components of adhesive systems.

5. The student will be able to discuss the properties and proper manipulation of acid etchants.

6. The student will be able to discuss the properties and proper manipulation of primers.

7. The student will be able to list trade names, uses, properties, and manipulation of adhesive bonding systems.

8. The student will be able to discuss the properties and proper manipulation of adhesive resins.

9. The student will be able to discuss and identify characteristics and components of the smear layer.

10. The student will be able to discuss the hybrid layer or zone.

11. The student will be able to discuss adhesive properties with amalgam bonding.

12. The student will be able to discuss adhesive properties and resin composites.

#### **OPERATIVE INSTRUMENTS:**

1. The student will be able to identify and describe the use of the following cutting instruments: hatchets, chisels, hoes, gingival margin trimmers, angle formers, and excavators.

2. The student will be able to identify and describe the use of the following condensing and carving instruments: Amalgam carrier, amalgam condensers, interproximal carvers, T-3 carvers, small and large carvers, greg 4/5 and burnishers.

#### **AMALGAM RESTORATIONS:**

1. The student will be able to state the reasons that amalgam restorations fail.

2. The student will be able to properly prepare the instruments required on a tray set up for amalgam condensing and carving.

3. The student will be able to evaluate the cavity prep for outline form, resistance form and retention form.

4. The student will be able to mix, load amalgam carriers and properly condense amalgam into the cavity preparation.

5. The student will be able to carve all surfaces with appropriate instrumentation to recreate proper anatomy.
6. The student will be able to properly evaluate the occlusion of the restored surface(s).
7. The student will be able to discuss the indications and contraindications of pin retained or supported restorations and buildups.

### **COMPOSITE (RESIN) RESTORATIONS:**

1. The student will be able to evaluate the cavity preparation and understand the selection of the appropriate restorative material.
2. The student will be able to discuss and describe factors affecting the etching, bonding, and curing processes for resin restorations.
3. The student will be able to demonstrate the steps for placing composite restorations.
4. The student will be able to list common problems, causes and potential solutions of placing composite restorations.

### **FINISHING AND POLISHING:**

1. The student will be able to define the following terms: finishing, polishing, recontouring.
2. The student will be able to list the benefits of finishing and polishing amalgam and resin restorations.
3. The student will be able to list and discuss precautions and contraindications for finishing and polishing amalgam and resin restorations.
4. The student will be able to identify armamentarium of rotary and hand instruments used in finishing and polishing.
5. The student will be able to identify polishing agents.
6. The student will be able to list the procedure steps for amalgam finishing and Polishing.
7. The student will be able to identify and properly utilize composite finishing and polishing instruments to establish appropriate contour and occlusion.