

## Course Objectives/Course Outline

### Spokane Community College

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**Course Title:** *Dental Restorative Techniques*

**Prefix and Course Number:** DENT 126

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#### **Course Learning Outcomes:**

**By the end of this course, a student should be able to:**

1. Identify the role of the dental assistant through demonstration of knowledge of the discovery and development of materials used in dentistry, safety of handling of materials, properties of materials, including impression materials, gypsum and waxes.
2. Identify instruments, sequence of procedures and the importance of fixed and removable prosthodontics.
3. Use dental nomenclature relating to dental chairside equipment and procedures orally and in writing.
4. Define and spell terminology used in this unit.
5. Identify when and where to use personal protective equipment prior to, during and after treatment following OSHA/WISHA standards.
6. Be familiar with Washington State Department of Health Scope of Practice as related to chairside procedures allowable in Washington State.
7. Demonstrate professional interpersonal communication both verbal and nonverbal with instructors and peers.

#### **Course Outline:**

##### **Impression Materials**

- 1) List the chemical composition and physical characteristics of each type of dental material.
- 2) Use dental nomenclature relating to dental materials both orally and in writing.
- 3) List storage requirements for each type of material.
  1. Define and spell terminology associated with each material:
    - a. irreversible hydrocolloid
    - b. silicone impression material
    - c. polysiloxane impression material
    - d. polysulfide impression material
    - e. polyether impression material
- 4.) Explain the uses, storage requirements and shelf life of the above impression materials.
- 5.) Describe the precautions, uses, techniques, chemical composition, and physical characteristics of the impression materials listed in #1.

##### **Gypsum**

- 1.) Define and spell terminology associated with this material.
- 2.) List and explain the characteristics and uses of gypsum products, including the:
  - a. Chemical components
  - b. Water/powder ratios
  - c. Dimensional setting expansion
  - d. Compressive strength
- 3.) Differentiate between dental stones and dental plaster in terms of: how they are manufactured from solid gypsum, technical name, crystalline structure, and uses in the dental office.
- 4.) Describe how powdered dental stone and plaster are reformed into solid gypsum including: comparative water/powder ratio, setting time, setting expansion, and the factors affecting final strength.

- 5.) Describe the setting reaction of stone and plaster.
- 6.) Explain the effect of each of the following on the setting time, setting expansion and compressive strength of dental stone and plaster:
  - a. Potassium sulfate
  - b. Borax
  - c. Sodium chloride
  - d. Speed and length of spatulation
  - e. H<sub>2</sub>O temperature
  - f. Humidity
  - g. Use of old mixing bowl and/or dirty spatula
  - h. Shelf life/hydration
  - i. H<sub>2</sub>O powder ratio
- 7.) Explain proper storage method for stones and plaster.
- 8.) Explain the time constraints on pouring a model recommended for:
  - a. Reversible/ Irreversible hydrocolloid
  - b. Silicone / Polysiloxane/ Polysulfide/ Polyether

### **Waxes**

- 1.) Define and spell terminology associated with this material.
- 2.) Identify the primary use and list storage requirements of the following dental waxes: inlay, baseplate, sticky, boxing, and utility.
- 3.) Identify the composition of inlay wax
- 4.) Explain why the properties of an inlay wax are critical.
- 5.) Explain how the inlay wax should be softened.
- 6.) Explain why the thermal expansion of inlay wax is such an important factor.

### **Fixed and Removable Prosthodontics**

#### **I. Removable Prosthodontics**

1. Define and spell the terminology related to prosthodontics.
2. Identify the materials used in the construction of a crown.
3. Name materials used to obtain the patient's bite registration and their use in prosthodontics.
4. Describe the role of the dental technician in prosthodontics.
5. List factors that must be included in a work order for the dental technician on removable prosthodontics.
6. Describe differences between pouring impressions for stone dies and for study casts.
8. Prepare a prescription for the laboratory technician directing the construction of a removable prosthetic.

#### **II. Fixed Prosthodontics**

1. Describe indications and contraindications for fixed prosthodontics.
2. Describe the components of fixed prosthodontics.
3. Describe the dental assistant's role in fixed prosthodontic procedures.
4. List and describe the steps of procedure in fixed prosthodontics.
5. Describe gingival retraction.
6. Describe and identify dental materials used in fixed prosthodontics including impression, custom tray, temporary and bite registration materials and cements.
7. Describe the role of the dental laboratory.
8. Explain the laboratory steps of procedure in fixed prosthodontics.
9. Describe instrumentation when assisting in fixed prosthodontics.
10. Discuss patient relations and understanding.
11. Describe cosmetic dentistry, procedures and materials used.