

**Common Course Outline**  
**DNHY 123**  
**Dental Materials & Procedures**  
**2 Semester Hours**

**The Community College of Baltimore County**

**Description**

**DNHY 123 – 2 Credits – Dental Materials and Procedures** introduces the dental hygiene student to the purpose and use of various dental materials utilized in dentistry. It includes the physical, chemical, biological and mechanical properties of materials commonly used in dentistry. Laboratory experiences emphasize proper manipulation of the various dental materials.

**2 credits; 1 hour lecture and 3 hours laboratory per week.**

**Co-requisites: DNHY 120, DNHY 121, DNHY 122, and DNHY 124**

**Overall Course Objectives**

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

1. define the purpose of the American Dental Association Specifications for Dental Materials and Devices;
2. identify the physical, chemical, and biologic properties of specific dental materials;
3. relate the physical, chemical, and biologic properties in relationship to the selection, manipulation and care of dental materials used within the dental hygiene scope of practice;
4. state the effects of variations in techniques on the properties of materials;
5. recognize, select and apply dental materials used in preventive and therapeutic dental procedures to provide quality client care;
6. differentiate between the various types of dental materials and their respective properties and manipulate materials used in dentistry;
7. compare and contrast preventive and restorative dental materials;
8. describe the role of hazardous materials and the procedures required for handling them safely;
9. demonstrate current, acceptable aseptic and safety procedures in both laboratory and clinical settings when using a given materials or providing therapeutic or preventive services;

10. apply the principles of professional and ethical behavior when providing additional dental hygiene services;
11. educate the client about dental procedures involving dental materials and the proper maintenance of restorations and oral prostheses;
12. provide a variety of high quality therapeutic and preventive services within the dental hygiene scope of clinical practice that involve selection and manipulation of appropriate dental materials; and
13. demonstrate laboratory and clinical proficiency in the following skills: making alginate impressions/study models, placing pit and fissure sealants, fabrication of mouthguard, fluoride tray and bleaching tray, polishing restorations and placement/removal of periodontal dressing.

### **Major Topics**

- I. Introduction to Dental Materials
- II. Materials Science
- III. Physical and Mechanical Properties of Materials
- IV. Specialty Materials
  - a. Oral Appliances
  - b. Periodontal packing and dental sutures
- V. Dental Materials
  - a. Dental Sealants
  - b. Alginate & Impression Materials
  - c. Gypsum Materials
  - d. Adhesive Materials
  - e. Dental Cements
  - f. Direct Polymeric Restorative Materials
  - g. Direct Metallic Restorative Materials
  - h. Polishing Materials & Abrasion
  - i. Indirect Restorations and Prostheses
  - j. Gold Alloys and Dental Castings
  - k. Tooth Whitening

### **Course Requirements**

Grading/exams: Grading procedures will be determined by the individual faculty member but will include a minimum of three quizzes, eight laboratory exercises, and two examinations.

Writing: The individual faculty member will determine specific writing assignments.

### **Other Course Information**

This course is a required course in the dental hygiene degree program. A grade of “C” or better is required for all dental hygiene courses in order to progress within the program.

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.