

# Dakota County Technical College

## DENT 1145: Dental Materials

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 3

Lab Hours/Week: 1

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course provides the student with the knowledge and practical application of dental materials commonly found in the dental office. Emphasis will be on chemical and physical properties, uses, types and applications. Students will be able to identify uses for specific dental products and be aware of specific care and storage properties of various materials.

**B. COURSE EFFECTIVE DATES:** 10/14/2010 - Present

**C. OUTLINE OF MAJOR CONTENT AREAS**

## **D. LEARNING OUTCOMES (General)**

1. Identify Occupational Safety and Health Administration (OSHA) guidelines
2. Describe the characteristics of dental materials
3. Obtain various types of impressions on a typodont
4. Take a study model impression with a wax bite on a patient
5. Present an oral and written presentation on a dental material
6. Demonstrate the fabrication of an aluminum temporary crown
7. Demonstrate the removal of temporary cement from the margins of the temporary aluminum crown
8. Demonstrate the removal of an aluminum temporary crown
9. Display oneself in a professional and ethical manner during all laboratory sessions
10. Wear the proper attire during all laboratory sessions
11. Exhibit their individual obligation with laboratory clean-up assignments
12. Define terminology used in relation to dental materials
13. Distinguish between the physical and biological considerations when working in the oral cavity
14. Demonstrate the ability to properly manipulate a variety of dental products
15. Determine the storage, care and clean-up procedures for dental materials
16. Determine the factors that affect the setting time of dental materials
17. Identify the general uses, names, ADA Specification Types, and classification of gypsum products
18. Compare the physical and chemical properties of all gypsum products
19. Identify preparation procedures for all gypsum products
20. Differentiate the primary and secondary uses of impression materials used in the lab
21. Identify the physical and chemical properties of the impression materials.
22. Identify the necessary armamentarium for the impression procedure
23. Identify the mixing time, working time, and setting time of impression materials
24. Compare the ADA classification, type and brand names with the chemical type of impression material
25. Compare advantages and disadvantages of impression materials
26. Determine the storage and care instructions for impression materials
27. Contrast aqueous impression materials with nonaqueous elastic impression materials
28. Distinguish the affect of accelerators and retarders in various materials
29. Identify the types of waxes with the correct classification
30. Identify characteristics of expansion and distortion of dental waxes
31. Compare the ADA classification and brand names with the chemical type of dental cement
32. Identify the armamentarium needed for mixing dental cements
33. Identify the types, forms, physical and chemical properties of dental cements
34. Identify preparation, manipulations, mixing time, and setting time of dental cements
35. Compare the definition for a base and luting consistency for each dental cement
36. Differentiate the primary and secondary uses of dental cements
37. Identify the advantages and disadvantages of each dental cement
38. Compare the advantages and disadvantages of restorative material
39. Demonstrate their ability to manipulate dental amalgam using adequate mercury hygiene precautions
40. Identify preparation, manipulation, mixing time and setting time of restorative material
41. Identify preparation and manipulation techniques when working with resin materials
42. Identify the physical and chemical properties of restorative material
43. Identify the advantages and disadvantages when working with synthetic resin materials
44. Compare the uses of restorative material

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45. List in order the steps for applying pit and fissure sealants
46. Discuss aspects of patient preparation for alginate impressions
47. Take a bite registration
48. Evaluate impressions used for study models
49. Demonstrate infection control and safety practices with dental materials
50. Demonstrate the procedure for fabricating a custom tray
51. Demonstrate the fabrication and finishing of a bleaching tray
52. Research a dental material used in the dental office

**E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

None

**F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted