

**J. Sargeant Reynolds Community College  
Course Content Summary**

**Course Prefix and Number: DNL 110**

**Credits: 3**

**Course Title:** Dental Laboratory Materials

**Course Description:** Studies chemical composition, physical properties, and uses of metallic and non-metallic dental materials, dentures and tooth resins, porcelain, waxes and duplicating materials. The laboratory exercises are designed to illustrate the properties and uses of the materials studied, including their inherent limitations. Students observe fabrication procedure demonstrations and receive one-on-one instruction during part of the laboratory sessions. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**General Course Purpose:** Students must learn manipulative skills and physical properties of dental materials in order to function and construct various dental prostheses in the commercial laboratory.

**Course Prerequisites and Co-requisites:**

**Prerequisites:** General admission to the college. Students must successfully complete all placement tests and have an interview with the program head to determine interests, motivation, and aptitudes related to dental lab technology.

**Course Objectives:**

Upon completing the course, the student will be able to:

- a. Demonstrate knowledge through written examinations and laboratory demonstrations, the manipulative skills necessary for proper handling of current dental materials used in the dental laboratory.
- b. Describe the chemical and physical properties in written examinations.
- c. Demonstrate an understanding of the chemical and physical properties by describing proper usage and selection of all dental materials through written examinations.

**Major Topics to Be Included:**

- a. Gypsum products and investments
- b. Impression materials
- c. Casts, models, and dies
- d. Waxes and synthetic resins
- e. Metallurgy and solders
- f. Abrasives and polishing agents
- g. Porcelain and composites

**Effective Date of Course Content Summary:** August 22, 2008