

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

**Course Prefix and Number:** DNL 140

**Credits:** 5

**Course Title:** Dental Anatomy, Physiology, and Principles of Occlusion

**Course Description:** Introduces students to human anatomy, physiology, and occlusion. Emphasizes regions of the head and neck and the primary and permanent teeth. Provides a general overview of the masticatory system and the dynamics of mandibular movement. Includes laboratory exercises related to accurate scale drawings of the permanent teeth and tooth waxings of the permanent teeth. Features occlusal restorations fabricated in wax on a semi-adjustable articulator according to functional criteria. Covers fabrication procedure and demonstrations. Prerequisites: General admission to the college. Students must pass all placement tests and have an interview with the program head to determine interest, motivation, and aptitudes relating to dental laboratory technology. Lecture 3 hours. Laboratory 6 hours. Total 9 hours per week.

**General Course Purpose:** The focus of this course is to provide a thorough knowledge of dental terminology, tooth morphology, oral anatomy, and occlusal concepts, and apply these principles as related to the fabrication of dental prostheses in order to function as a dental laboratory technician.

**Course Prerequisites and Co-requisites:**

**Prerequisites:** General admission to the college. Students must pass all placement tests and have an interview with the program head to determine interest, motivation, and aptitudes relating to dental laboratory technology.

**Course Objectives:**

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

- a. Demonstrate knowledge of nomenclature as it relates to dental laboratory technology;
- b. Describe anatomical landmarks and their relationships to dental prostheses;
- c. Explain the inter-relationships of gross dental structures;
- d. Manipulate and carve wax in the development of manual dexterity and morphology of teeth;
- e. Demonstrate a basic knowledge and understanding of occlusion;
- f. Describe the usage and demonstrate the practical application of articulators; and
- g. Demonstrate in the laboratory the P.K.T. and Cusp to Fossa functional waxing skills.

**Major Topics to be Included:**

- a. Dental terminology and general considerations—maxillary incisors
- b. Skeletal anatomy—maxillary incisors continued
- c. Muscular anatomy—mandibular incisors
- d. Vascular anatomy and neuroanatomy—max and mand canines
- e. Associated and supportive structures of the teeth and edentulous mouth—max. premolars
- f. Temporomandibular articulation and occlusions—mand premolars
- g. Development of teeth and primary dentition—max and mand molars
- h. Articulators
- i. Functional waxing techniques

**Effective Date of Course Content Summary:** July 14, 2014