Course Prefix and Number: DNL 220

Course Title: Introduction to Dental Ceramics

Course Description: Introduces students to ceramic and porcelain-fused-to-metal dental restorations. Includes techniques of design and fabrication of metal substructures followed by ceramic firing techniques. Discusses various ceramic alloy and all-ceramic crown techniques. Students observe fabrication procedure demonstrations and receive one-on-one instruction during part of the laboratory sessions. Lecture 3 hours. Laboratory 9 hours. Total 12 hours per week.

General Course Purpose: Students must be able to perform ceramic fixed restoration techniques in order to function as a dental laboratory technician in a commercial dental laboratory or dental office.

Course Prerequisites and Co-requisites:
Prerequisites: General admission to the college. Students must interview with the program head in order to determine interest, motivation, and aptitudes in dental lab technology.

Course Objectives:
Upon completing the course, the student will be able to:
a. Define terminology and nomenclature as it relates to dental ceramics;
b. Demonstrate fabrication procedures for various types of ceramic restorations;
c. Demonstrate the use and designs of porcelain-fused-to-metal restorations; and
d. Demonstrate procedures for CAD/CAM all ceramic restorations.

Major Topics to Be Included:
a. Fundamentals of substructure design and investing and casting ceramic alloys
b. Metal preparation for porcelain application
c. Opaque application and the nature of the porcelain bond
d. Porcelain build-up technique and composition
e. Staining, characterizing, and glazing techniques
f. Pre- and post-soldering procedures
g. Resin bonded bridges
h. CAD/CAM design for all ceramic crowns

Effective Date of Course Content Summary: August 22, 2008