



# COURSE OUTLINE

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**Course Name:** Dental Laboratory Sciences 1

**Department Head/Coordinator:** Allan White

**Effective Date:** September 2014

<b>School or Centre:</b>		<b>Department:</b>	
School of Health Sciences		Denturist/Dental Technology Department	
<b>Course History:</b>		<b>Year of Study:</b>	
Replacement Course		1st Year Post-secondary	
<b>Name of Replacing Course (if applicable):</b>	DENT 1868	<b>Course Number:</b>	DENT 1120
		<b>Number of Credits:</b>	4.0

## Course Pre-requisites (if applicable):

Program Admissions Requirements

## Course Co-requisites (if applicable):

all semester one courses

## PLAR (Prior Learning Assessment & Recognition)

No  Yes (details below):

## Course Description:

This course reviews the basic science concepts and introduces new concepts of chemistry, microbiology and physics as they pertain to dental laboratory technology techniques, materials, instruments and equipment. Students will learn key health and safety and quality management skills. Students will learn about hygiene and health promotion to avoid infection and cross-contamination in a dental laboratory environment.

**Note to instructors:** An instructional strategy is an approach that an instructor uses to achieve the learning outcomes (e.g., lecture, case study, video, group work).

### **Instructional Strategies:**

Lectures, seminars, demonstrations, case study analysis, project work and practice in labs

### **Course Learning Outcomes:**

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

1. Describe the general laboratory procedures, techniques and processes related to the fabrication of various types of dental prostheses;
2. Describe the basic principles of physics and chemistry as they relate to the practice of Dental Technology;
3. Describe the characteristics, physical and mechanical properties, and classification of materials used in the practice of Dental Technology;
4. Describe the handling and application of materials used in the practice of dental technology;
5. Describe the principles of operation of the equipment used in dental technology;
6. Select and utilize equipment appropriate to the specified procedures, safely and efficiently;
7. Describe the potential dangers in laboratory associated with the use of dental materials, laboratory equipment, and other potentially biohazardous materials;
8. Describe the basic procedures for proper handling and control of hazardous materials;
9. Explain current workplace health and safety standards including dental laboratory asepsis, and infection control.

### **Program Learning Outcomes:**

The graduate of the VCC Dental Technology program will have the skills and abilities to:

1. Design, fabricate, modify and repair removable oral/dental prostheses;
2. Design, fabricate, modify and repair fixed oral/dental prostheses;
3. Design, fabricate, modify and repair oral/dental appliances used in orthodontics, oral and maxillo-facial surgery and other dental treatments;
4. Integrate general knowledge of dental laboratory procedures, physics and chemistry principles, associated with the fabrication of oral appliances and dental restorations;
5. Assess the characteristics and properties of dental materials associated with the fabrication of oral appliances and dental restorations and make decisions about their appropriate application in practice;
6. Assess the characteristics and operation of equipment and special instrumentation associated with the fabrication of oral appliances and dental restorations and make decisions about their appropriate application in practice;
7. Assess the fundamental elements of dental anatomy, dental physiology, dental morphology and basic elements of oral pathological conditions and apply relevant knowledge to dental technology practice;
8. Practice to current workplace health and safety standards including dental laboratory asepsis, and infection control;
9. Apply essential elements and skills of behavioural sciences, communications, professional ethics, legal obligations and business management to dental technology practice;
10. Make decisions that reflect critical thinking and problem solving; integrate pertinent theoretical knowledge and empirical data and information literacy skills to justify and/or revise services.



**Course Topics and Sequence Covered:**

Knowledge of dental materials, equipment and instruments  
Safety and emergency response  
WHMIS (Workplace Hazardous Material Information System)  
Worksafe BC Rules  
Laboratory hygiene  
Infection control  
Protective equipment/devices  
Health promotion  
Preventive dentistry  
Basic concepts of physics and chemistry as they pertain to dental prosthetics.

### **VCC Education and Education Support Policies**

There are a number of **Education** and **Education Support** policies that govern your educational experience at VCC, please familiarize yourself with them.

The policies are located on the VCC web site at:

<http://www.vcc.ca/about-vcc/policies/index.cfm>

To find out how this course transfers, visit the BC Transfer Guide at [www.bctransferguide.ca](http://www.bctransferguide.ca).

#### **FOR COMMITTEE USE ONLY**

<b>Date Approved by Education Council:</b>		<b>Date Approved by VCC Board (if applicable):</b>	
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