



# COURSE OUTLINE

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**Course Name:** Orthodontics 3

**Department Head/Coordinator:** Allan White

**Effective Date:** Sept 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		2nd Year Post-secondary	
<b>Name of Replacing Course (if applicable):</b>	DENT 4003	<b>Course Number:</b>	DENT 2460
		<b>Number of Credits:</b>	4.0

**Course Pre-requisites (if applicable):**

All courses in semesters one, two and three.

**Course Co-requisites (if applicable):**

N/A

**PLAR (Prior Learning Assessment & Recognition)**

No  Yes (details below):

**Course Description:**

This course expands upon the orthodontic theory and laboratory skills from the past three semesters. While expected to maintain the previously achieved orthodontic competencies, students will design, fabricate, problem solve and self-evaluate additional complex fixed and removable orthodontic appliances. Pre-learned material is independently reviewed, studied and formally assessed through a written theory examination that supports success in practicum and on written licensing examinations after graduation.

**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:**

Lecture, demonstration, laboratory project work, practical hands on experience with skill and technique, working with objective, subjective case evaluations (OSCEs).

### **Course Learning Outcomes:**

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

1. Assess knowledge of the fundamental elements of dental and occlusal anatomy and physiology and dental morphology and basic elements of oral pathological conditions and apply relevant knowledge to the design and fabrication of orthodontic appliances;
2. Integrate general knowledge of dental laboratory procedures, physics and chemistry principles, associated with the fabrication of oral appliances and dental restorations;
3. Assess the characteristics and properties of dental materials associated with the fabrication of orthodontic appliances and make decisions about their appropriate application in practice;
4. Apply the basic concepts related to the design and fabrication of various orthodontic appliances including: extra oral anchorage (head gear), Bionator, twin block, sagittal expansion, advanced removable retainers and bilateral space maintainers;
5. Integrate the following concepts related to advanced orthodontics: principles of treatment in Class 1, 2, and 3 occlusion, surgical orthodontic treatment and extraoral anchorage (head gear);
6. Implement skills and techniques to design, fabricate, modify and repair orthodontic appliances including: twin block, mandibular bilateral space maintainers, wrap around Hawley retainer and sagittal expansion appliance
7. Utilize CAD-CAM technology in orthodontic appliance design and fabrication;
8. Apply essential elements and skills of behavioural sciences, communications, professional ethics, legal obligations and business management to dental technology practice.

### **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.

**Evaluation/Grading System** *(Click on drop down box arrows to see list of options)*

Grading System	Specify if 'Other':	Specify Passing Grade:
Letter Grades		C+ 64%

**Components and Weighting of the Assessment/Evaluation Plan:** *(Click on drop down box arrows to see list of options)*

Type	Percentage	Evaluation Plan (provide a brief explanation for each component especially if value exceeds 35%):
Midterm Exam	30	Written exam-multiple choice, short and long answer
Assignments	35	Assignment-technique and skill assessment
Final Exam	35	Written exam-multiple choice, short and long answer
		Practical Projects (x3) Grade will be Satisfactory (S) or Unsatisfactory (U) utilizing competency rubrics
		Students must earn an "S" grade in all projects to pass this course
	<b>Total</b>	<b>100</b>

**Learning Environment/Type** *(Select all that are used within the course)*

Instruction Type	Hours Per Instruction Type	Comments
B - Lab (Computer, Chemistry...)	90	
L - Classroom	20	
E - Seminar	10	
<b>Enter Total Hours</b>	<b>120</b>	

**Resource Material(s):**

Resources are items in addition to tuition that the student is responsible for purchasing. Course resource information will be supplied by the department/instructor.

**Course Topics and Sequence Covered:**

Extra oral anchorage (head gear)  
Principles of treatment in Class 1, 2 and 3 occlusion  
Functional appliances  
Bionator appliance  
Twin block appliance  
Sagittal expansion appliances  
Advanced removable retainer  
Surgical orthodontic treatment  
Bilateral space maintainer  
CAD-CAM advances in orthodontic treatment and fabrication

**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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