

DENTAL (DENT)

DENT 1100 Credits: 11

Dental Technology Foundations Total Hours: 300

Students will learn the foundational knowledge, laboratory skills and techniques required to support the design and fabrication of single fixed restorations, removable partial and complete dentures, and simple fixed and removable orthodontic appliances.

DENT 1110 Credits: 4

Biosciences 1 Total Hours: 120

This course introduces students to the function of the human body and the anatomical features of the hard and soft tissues in the head and neck. Students will also learn about tooth morphology, hygiene and health promotion to avoid infection and cross-contamination.

DENT 1120 Credits: 4

Dental Laboratory Sciences 1 Total Hours: 120

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. This course is part of the full-time Dental Technology Program.

DENT 1130 Credits: 1

Professional Practice 1 Total Hours: 30

This course introduces students to the ethics, jurisprudence, regulation and scope of the various professions in dentistry. Students will learn interpersonal skills including teamwork and inter-professional collaboration as well as develop required skills in regards to being culturally sensitive in a healthcare environment. Principles of critical thinking, problem-solving, self and peer evaluation and decision-making are also important components of this course. Students are introduced to information literacy and research skills, principles of professionalism, self-management, learning styles and study abilities.

DENT 1170 Credits: 1

Dental Lab Patient Care 1 Total Hours: 30

This course reviews the basic concepts of chemistry and physics as it pertain to dental laboratory technology, 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.

DENT 1180 Credits: 3

Digital Technology 1 Total Hours: 90

This course introduces students to the use of dental related software. The information and techniques will be applied to the design and creation of patterns for basic dental restorations from various restorative dental materials. Students will also use the dental software to learn and practice tooth anatomy and morphology.

DENT 1210 Credits: 1

Biosciences 2 Total Hours: 30

This course is designed to build on pre-learned oral histology and introduce principles of oral pathology. This will include decision-making about the relevance of clinical signs and symptoms and underlying cellular changes with an emphasis on pathologies of the orofacial region. Students will problem solve Temporomandibular Joint (TMJ) dysfunction and occlusal disorders as they apply the design, fabrication, modification and repair of oral prostheses.

Pre-requisite(s): DENT 1100, DENT 1110, DENT 1130, DENT 1170, DENT 1180

DENT 1220 Credits: 4

Dental Laboratory Sciences 2 Total Hours: 120

This course builds on information introduced in courses in Semester One. It focuses on occlusion, Temporomandibular Joint (TMJ) and occlusal function and dysfunction related to dental appliance design and fabrication. This course also introduces students to basic concepts of Dental Computer Assisted Design and Milling techniques (CAD-CAM) and implant technique, materials, instruments, equipment and technology. Students will utilize CAD technology to design simple fixed and removable dental appliances as prescribed. This course is part of the full-time Dental Technology Program.

DENT 1240 Credits: 6

Removable Prosthetics 1 Total Hours: 180

This theory and practice course builds on the knowledge, skills and techniques introduced in Dental Foundations in Semester One. The focus of this course is on removable prosthetic maintenance and the role of the dental technician as it relates to the oral health of the patient receiving a prosthetic. Included are laboratory skills of fabricating a complete denture, wrought wire, acrylic removable partial dentures; polishing and finishing complete and partial dentures and modifying, repairing and relining removable prosthetics.

Pre-requisite(s): DENT 1100, DENT 1110, DENT 1130, DENT 1170, DENT 1180

DENT 1250 Credits: 6

Fixed Prosthetics 1 Total Hours: 165

A continuation of the knowledge, skills and techniques introduced in Dental Foundations in Semester 1, students will fabricate single unit restorations as prescribed. Students are introduced to dental ceramics including the characteristics and composition of porcelain, aesthetics, colour and shading, and the manipulation and firing of porcelain. Fabrication of single unit Ceramic restorations and the correction of dental porcelain defects are practiced. This course expands upon the theory base of the previous semester and will enhance students' ability to design, fabricate, modify, repair, analyze and self-evaluate their dental prostheses. DENT 1130, DENT 1170, DENT 1180.

Pre-requisite(s): DENT 1100, DENT 1110

DENT 1260 Credits: 3

Orthodontics 1 Total Hours: 90

Students are introduced to the theoretical knowledge and supportive laboratory skills related to the fabrication of fixed and removable orthodontic appliances, and their repairs. The design and fabrication of retainers, removable appliances, space maintainers and repairs of orthodontic appliances are the foundation of the theory and applied laboratory practice for this course.

Pre-requisite(s): DENT 1100, DENT 1110, DENT 1130, DENT 1170, DENT 1180

DENT 1270 Credits: 1**Dental Lab Patient Care 2 Total Hours: 30**

This course builds on the knowledge and skills acquired from Dental Laboratory Patient Care 1. Students will continue to develop their abilities to operate in a safe and competent manner in a dental laboratory environment. Students will learn about intra and extra oral photographing of patients to assist in the technical treatment planning. Students will also learn to perform clinical laboratory procedures (preliminary impression taking and tooth shade matching) in a competent manner.

Pre-requisite(s): DENT 1100, DENT 1110, DENT 1130, DENT 1170, DENT 1180

DENT 1280 Credits: 3**Digital Technology 2 Total Hours: 90**

This course builds on the knowledge and skills learned in Digital Technology 1. Digital Technology 2 focuses on creating single unit dental crown patterns with emphasis on aesthetics, form and basic function. Students will continue with AFG (Anatomical Functional Geometry or similar systems) dental anatomy exercises using Dental Computer Aided Design (CAD) software sculpt tools. This course also introduces dental implants and Computer Aided Manufacturing (CAM).

Pre-requisite(s): DENT 1100, DENT 1110, DENT 1130, DENT 1170, DENT 1180

DENT 1500 Credits: 0**CDA Refresher Total Hours: 42**

The Certified Dental Assisting (CDA) Refresher course will provide an opportunity for those lacking in hours of clinical practice to demonstrate competency of skills and therefore meet requirement for licensure in BC.

Pre-requisite(s): Previously licensed as a Certified Dental Assistant in British Columbia or equivalent

DENT 1501 Credits: 3**Prep for Practice Theory 1 Total Hours: 60**

This lecture/seminar course introduces the student to the profession of Certified Dental Assisting. Course topics include interpersonal and inter-professional communication, conflict resolution in a health care setting, and the legal scope of practice of a Certified Dental Assistant (CDA). The course also focuses on the concepts and principles related to the preparation phase of patient care by emphasizing the dental equipment, instruments and armamentaria required for restorative dental procedures as well as the fundamentals of microbiology and the responsibility of the CDA for infection control. Additionally, students are introduced to patient records and dental charting. This course is part of the full-time Certified Dental Assisting Program.

Pre-requisite(s): Meet Certified Dental Assisting program admission requirements

DENT 1502 Credits: 2**Patient Assessment Theory 1 Total Hours: 40**

This lecture/seminar course builds on the students' existing knowledge of human anatomy and physiology, focussing on body systems, head and neck anatomy, dental morphology and tooth development and the inspection and assessment of oral structures. Additionally, the importance of health history information and medical conditions requiring modifications in dentistry as well as interviewing and questioning skills appropriate for obtaining health history information are explored.

Pre-requisite(s): Meet Certified Dental Assisting program admission requirements

Co-requisite(s): All Term 1 courses DENT 1501, DENT 1503, DENT 1504, DENT 1505

DENT 1503 Credits: 3**Plan, Implemen & Eval Theory 1 Total Hours: 60**

This lecture/seminar course is designed to introduce the student to the principles of oral self-care. Emphasis is placed on the Certified Dental Assistant's (CDA) role during restorative dental procedures. Pain control methods, isolation techniques and the properties and manipulation of dental materials are explored within the context of a safe and accident prevention model. Additionally, students are prepared for their first practicum rotations in a dental practice setting. This course is part of the full-time Certified Dental Assisting Program.

DENT 1504 Credits: 7.5**Clinical Practice 1 Total Hours: 247**

The first clinical course provides an opportunity for students to integrate foundational theory with basic clinical practice in the dental clinic, laboratory settings and during a dental office practicum. This introductory course focuses on the supportive and independent clinical role of the Certified Dental Assistant. Competencies are met through simulated manikin (SIM) and peer (PR) practice.

Pre-requisite(s): Meet Certified Dental Assisting (CDA) program requirements

Co-requisite(s): All Term 1 courses

DENT 1505 Credits: 2**Dental Radiography 1 Total Hours: 50**

This foundational lecture/clinical course introduces students to the history and current application of radiation in dentistry. The components, operation and variables of dental x-ray machine are examined in tandem with the principles of radiation biology, safety and protection for patients and operators. Radiography prescription requirements, chart entries and quality assurance are discussed. Digital and conventional intra-oral radiographic technologies and imaging techniques are studied. In the clinical setting, using digital and conventional technology and various imaging techniques, competencies are met through simulated manikin (SIM) practice.

Pre-requisite(s): Meet Certified Dental Assisting program admission requirements

Co-requisite(s): All Term 1 courses DENT 1501, DENT 1502, DENT 1503, DENT 1504

DENT 2320 Credits: 3**Dental Laboratory Sciences 3 Total Hours: 90**

This course introduces students to advanced concepts of CAD-CAM and dental implant design, fabrication, modification and repair techniques, materials, instruments, equipment and technology. Students will use CAD-CAM technology to design and fabricate complex implant fixed and removable dental appliances. This course is part of the full-time Dental Technology Program.

DENT 2330 Credits: 1**Professional Practice 2 Total Hours: 30**

In this course, students will learn about the three pillars of sustainability in business practice. Students will create a resume for the purpose of submitting it for their practicum placements. Interviewing and interpersonal relationships and skills are rehearsed through role play activities, in preparation for job interviews in the field of Dental Technology. Students will practice self and peer evaluation, critical thinking, as well as decision-making techniques. Learners will develop and maintain portfolios with artifacts as evidence of attainment of core competencies. Finally, stress management and effective communication techniques will be learned and practiced.

Pre-requisite(s): DENT 1210, DENT 1240, DENT 1250, DENT 1260, DENT 1270, DENT 1280

DENT 2340 Credits: 6**Removable Prosthetics 2 Total Hours: 180**

In this course, students will create complete, partial and immediate dentures, as well as overdentures. The course will include working with these dentures in a variety of situations and degrees of difficulty. Maxillofacial prostheses will also be discussed. Traditional and digital applications will be integrated into the design and fabrication processes.

Pre-requisite(s): DENT 1210, DENT 1240, DENT 1250, DENT 1260, DENT 1270, DENT 1280

DENT 2350 Credits: 7**Fixed Prosthetics 2 Total Hours: 190**

This theory and laboratory course expands upon information and techniques from DENT 1250 Fixed Prosthetics 1, focusing on the design and fabrication of multiple unit fixed restorations. Students learn to fabricate crowns and bridges from various restorative dental materials. Students also apply fabrication techniques for single dental implants, using Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM) techniques.

Pre-requisite(s): DENT 1210, DENT 1240, DENT 1250, DENT 1260, DENT 1270, DENT 1280

DENT 2360 Credits: 3**Orthodontics 2 Total Hours: 90**

As a continuation of Orthodontics 1, students will fabricate more compound or complex fixed and removable orthodontic appliances as prescribed. This course expands upon the theory base of the previous semesters and will enhance the students' ability to design appliances, problem-solve and self-evaluate. Maintenance of the previously achieved orthodontic competencies will be expected.

Pre-requisite(s): DENT 1210, DENT 1240, DENT 1250, DENT 1260, DENT 1270, DENT 1280

DENT 2380 Credits: 3**Digital Technology 3 Total Hours: 90**

This course further expands the knowledge and skills learned in Digital Technology 2, using dental CAD (Computer Aided Design) and CAM (Computer Aided Manufacture). The focus is on strategic use of CAD programs and CAM technologies for comprehensive planning and executing of complex dental restorations and expanding knowledge on implant restoration processes.

Pre-requisite(s): DENT 1210, DENT 1240, DENT 1250, DENT 1260, DENT 1270, DENT 1280

DENT 2440 Credits: 8**Removable Prosthetics 3 Total Hours: 240**

In this course, students will analyze, design and select material for the fabrication and repair of complete and partial removable dentures. Students will expand on their digital application skills and knowledge from Removable Prosthetics 3. The students will also learn to perform quality control prior to releasing a dental prosthesis for the delivery.

Pre-requisite(s): DENT 2330, DENT 2340, DENT 2350, DENT 2360, DENT 2380

DENT 2450 Credits: 8**Fixed Prosthetics 3 Total Hours: 240**

This theory and laboratory course expands upon information and techniques for the design, fabrication, modification and repair of multiple unit restorations from Fixed Prosthetics 2. Students learn to fabricate various types of restorations such as metal, porcelain fused to metal (PFM) and All Ceramic crowns. Computer Aided Design and Computer Aided Manufacture (CAD-CAM) techniques are applied to the fabrication of single and multiple unit fixed prosthesis.

Pre-requisite(s): DENT 2330, DENT 2340, DENT 2350, DENT 2360, DENT 2380

DENT 2460 Credits: 4**Orthodontics 3 Total Hours: 120**

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 create, problem solve and self-evaluate additional complex fixed and removable orthodontic appliances.

Pre-requisite(s): DENT 2330, DENT 2340, DENT 2350, DENT 2360, DENT 2380

DENT 2510 Credits: 19**Dental Technology Practicum Total Hours: 570**

This course involves placement and practical experience in accredited dental laboratories. Students are supervised and mentored by Registered Dental Technicians (RDT), employers and their employees. Students work on real cases that involve the design, fabrication, modification and repair of Fixed Prosthetics; Full and Partial Removable Prosthetics and Orthodontic Appliances. Students will improve skills and productivity abilities. Students will gain practical experience in Computer Aided Design and Computer Aided Manufacture (CAD-CAM) technology. Post practicum, students have the opportunity to be evaluated by VCC faculty in preparation for the RDT Practical Licensing examinations after graduation. Students will be assessed to simulated entry to practice competency expectations.

Pre-requisite(s): DENT 2440, DENT 2450, DENT 2460

DENT 2530 Credits: 1**Professional Practice 3 Total Hours: 30**

Students will learn basic concepts of self-employment and practical business management. They will create a business plan and learn to read and analyze essential financial statements and explore personal and market factors that contribute to a successful dental laboratory. Effective leadership styles in business management, including effective communication and giving and receiving feedback will be addressed. Learners will identify strategies to create and maintain a healthy work-life balance and manage or decrease stress related to business ownership and management. Self-reflection through journaling techniques are used to document and discuss practicum experiences. Learners will participate in an online discussion forum relating to topics such as current professional issues, employment, continuing education and lessons learned during their practicum experiences.

Pre-requisite(s): DENT 2440, DENT 2450, DENT 2460

DENT 2991 Credits: 3**Prep for Practice Theory 2 Total Hours: 60**

This lecture/seminar course continues to explore the standards of practice and the legal and ethical responsibilities of a Certified Dental Assistant (CDA). Students are introduced to more complex dental charting and treatment planning for general dentistry procedures. Additionally, financial procedures, dental insurance processing, equipment maintenance and various inventory control systems are examined. This course is part of the full-time Certified Dental Assisting Program.

DENT 2992 Credits: 2**Patient Assessment Theory 2 Total Hours: 48**

This lecture/seminar course continues to examine head and neck anatomy with an in depth study of oral pathology. More complex health conditions and related pharmacology as well as vital signs and their relationship to dental procedures are discussed. Nutrition and its impact on oral health are explored and assessed.

Pre-requisite(s): All Term 1 courses

Co-requisite(s): All Term 2 courses DENT 2991, DENT 2993, DENT 2994, DENT 2995

DENT 2993 Credits: 4**Plan Implem & Eval Theory 2 Total Hours: 75**

This lecture/seminar course focuses on the principles of teaching and learning and the relationship to oral self-care instruction. The role of the Certified Dental Assistant (CDA) in preventive and esthetic dental procedures as well as the specialties of oral and maxillofacial surgery and endodontics are studied. Additionally, students are prepared for their second practicum rotations in a dental practice setting. This course is part of the full-time Certified Dental Assisting Program.

DENT 2994 Credits: 8**Clinical Practice 2 Total Hours: 284**

This second clinical course builds upon acquired skills and knowledge from Clinical Practice 1. Clinical Practice 2 provides an opportunity for the student to integrate previous and new theory with more advanced clinical concepts in the dental clinic, laboratory settings and during a dental office practicum. This course focuses on the independent clinical role of the Certified Dental Assistant. Competencies are met through simulated manikin (SIM) and peer (PR) practice.

Pre-requisite(s): All Term 1 courses

Co-requisite(s): All Term 2 courses DENT 2991, DENT 2992, DENT 2993, DENT 2995

DENT 2995 Credits: 2**Dental Radiography 2 Total Hours: 40**

This lecture/clinical course builds upon acquired knowledge and skills from Dental Radiography 1. Principles for inspecting and assessing the oral cavity and dentition and required modifications in exposure techniques are discussed. Supplemental radiographic exposures, pedodontic and edentulous radiographic surveys and extra-oral exposures are explored. In the clinical setting, using digital and conventional technology and various imaging techniques, competencies are met through simulated manikin (SIM), peer (PR) and patient care (PC) practice.

Pre-requisite(s): All Term 1 courses

Co-requisite(s): DENT 2991, DENT 2992, DENT 2993, DENT 2994

DENT 3740 Credits: 1.5**Prep for Practice Theory 3 Total Hours: 45**

This lecture/seminar course explores professionalism and inter-professional practice within the context of a Practising Certified Dental Assistant (CDA). The role of professional associations and the regulatory requirement for continued competency and practice hours within the context of life-long learning are discussed. Principles related to dental photography and software management systems are introduced. Domestic violence, substance abuse, tobacco intervention and cessation and the role and responsibility of a dental health care professional are also explored. This course is part of the full-time Certified Dental Assisting Program.

DENT 3741 Credits: 2**Patient Assessment Theory 3 Total Hours: 40**

This lecture/seminar course continues to study nutrition and the relationship to oral health. Dental procedures and management of the children, the elderly and special needs patients as well as more complex dental conditions are explored.

Pre-requisite(s): All Term 1 and Term 2 courses

Co-requisite(s): All Term 3 courses DENT 3740, DENT 3742, DENT 3743, DENT 3745

DENT 3742 Credits: 3**Plan Implem & Eval Theory 3 Total Hours: 75**

This lecture/seminar course continues to study preventive dentistry procedures and the laboratory support procedures. The dental specialties of prosthodontics/esthetic dentistry, orthodontics and periodontics are explored and discussed. The properties and manipulation of dental materials related to specialty areas are examined. An exploration of community dental health care, health promotion through group presentations and the operator role of the Certified Dental Assisting (CDA) are emphasized. Additionally, students are prepared for their final practicum rotations in a dental practice setting. This course is part of the full-time Certified Dental Assisting Program.

DENT 3743 Credits: 8**Clinical Practice 3 Total Hours: 321**

This final clinical course builds upon acquired skills and knowledge from Clinical Practice 1 and Clinical Practice 2. Clinical Practice 3 provides an opportunity for the student to integrate previous and new theory with independent clinical practice in the dental clinic, laboratory settings and during a dental office practicum. This course focuses on the independent clinical role of the Certified Dental Assistant. Competencies are met through simulated manikin (SIM) peer (PR) and patient care (PC) practice.

Pre-requisite(s): All Term 1 and Term 2 courses

Co-requisite(s): All Term 3 courses DENT 3740, DENT 3741, DENT 3742, DENT 3745

DENT 3745 Credits: 1**Dental Radiography 3 Total Hours: 10**

This final clinical radiography course focuses on the independent clinical radiography role of the Certified Dental Assistant. It provides an opportunity for students to prepare, sequence, modify exposure techniques, chart and transfer dental images. In the clinical setting, using digital technology, students expose a variety of prescribed radiographs with various imaging techniques. Competencies are met through patient care (PC) practice.

Pre-requisite(s): All Term 1 and Term 2 courses

Co-requisite(s): DENT 3740, DENT 3741, DENT 3742, DENT 3743