

RESTORATIVE DENTAL TECHNOLOGY (RDT)

RDT 125A BEGINNING FIXED PROSTHODONTICS

4 unit

Recommended Preparation: *Knowledge of basic computer skills*

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Theory, laboratory techniques and procedures for inlay, onlay and crown fabrication; esthetics, basic occlusal factors, tooth contour and anatomy of single tooth restorations as both a computer-aided-design (CAD) rendering and as a manual design. Total of 36 hours lecture and 108 hours laboratory.

Grade Mode: *Letter Grade*

RDT 125B INTERMEDIATE FIXED PROSTHODONTICS

5 unit

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Laboratory procedures for advanced Fixed Prosthodontics fabrication. Laboratory projects include design and fabrication of a multiple unit/tooth simulated patient case with an FPD with a semi-precision (broken-stress) attachment, post/core telescopic crown restoration mounted on a semi-adjustable articulator. Total of 36 hours lecture and 162 hours laboratory.

Grade Mode: *Letter Grade*

RDT 130A BEGINNING COMPLETE DENTURES

4 unit

Recommended Preparation: *Knowledge of basic computer skills*

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Theory and related laboratory procedures for fabricating preliminary and master casts. Use the semi-adjustable articulator for mounting denture master casts. Denture tooth selection, esthetic arrangement and set up of a complete set of maxillary and mandibular denture teeth. Infection control procedures as they pertain to removable prosthetics. Total of 36 hours lecture and 108 hours laboratory.

Grade Mode: *Letter Grade*

RDT 130B ADVANCED COMPLETE DENTURES

5 unit

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Techniques for processing bilaterally balanced complete dentures as well as finishing and polishing complete dentures to completion. Dentures opposing natural dentition, immediate dentures, overdentures utilizing computer-aided-design (CAD) software, and techniques to duplicate dentures and fabricate a surgical template. Total of 36 hours lecture and 162 hours laboratory.

Grade Mode: *Letter Grade*

RDT 135A BEGINNING DENTAL ANATOMY

2.5 unit

Dental anatomy nomenclature, classifications of dentition, permanent/deciduous dentition, dental arches, tooth notation systems, and supporting structures of teeth. Analysis of crown and root structures, combining terms of orientation, line, and point angles for anterior and posterior teeth. Maximum credit for DLT 116A and RDT 135A is 2.5 units. Total of 27 hours lecture and 54 hours laboratory.

Grade Mode: *Letter Grade*

RDT 135B INTERMEDIATE DENTAL ANATOMY

2.5 unit

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Sculpting and designing of selected posterior premolars and molars using wax carving blocks and computer-aided-design (CAD) software. Variations, fabrication methods for the interim or provisional fixed prosthesis as well as preparing and mounting dental casts to an articulator and anatomic tooth drawings of posterior teeth. Total of 27 hours lecture and 54 hours laboratory.

Grade Mode: *Letter Grade*

RDT 140A BEGINNING DIGITAL DENTISTRY CAD CAM I

1.5 unit

Recommended Preparation: *Knowledge of basic computer skills*

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Applications, advantages and limitations of digital dentistry. Computer-aided-design (CAD) and computer-aided-manufacture (CAM) system components and how they are related. Emphasis on step-by-step laboratory procedures associated with the digital design of fixed single tooth full crown dental prostheses using the laboratory scanner and computer-aided-design (CAD) software. Total of 9 hours lecture and 54 hours laboratory.

Grade Mode: *Letter Grade*

RDT 140B INTERMEDIATE DIGITAL DENTISTRY CAD CAM II

1.5 unit

Recommended Preparation: *General understanding of Microsoft Windows, importing/exporting files and Microsoft Power Point*

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Exploration of various computer-aided-manufacture (CAM) milling machinery (wet and dry, various axes), milling materials, and their applications for the digital fabrication dental prostheses. Emphasis on learning to operate and maintain a milling unit, exporting, and setting up patient cases in Dental Manager software. Total 9 hours lecture and 54 hours laboratory.

Grade Mode: *Letter Grade*

RDT 145 DENTAL MATERIALS**2 unit**

Overview of the history of dentistry; its milestone developments. The role of the American Dental Association (ADA) Council on Dental Materials and Devices, American National Standards Institute (ANSI), Food and Drug Administration (FDA) and U.S. Bureau of Standards as they relate to dental materials standards for manufacturing, patient safety, infection prevention and control as well as safe storage requirements. Total of 36 hours lecture.

Grade Mode: *Letter Grade*

RDT 150 DENTAL COMMUNICATION AND WORKPLACE READINESS SKILLS**0.5 unit**

Professionalism and workplace readiness needed for success in a dental setting with a focus on specific skills needed for working in fixed and removable restorative dental laboratories. Verbal and nonverbal communication skills, business telephone etiquette, written communication skills, and technology and voice mail etiquette. Job interview skills. Total of 9 hours lecture.

Grade Mode: *Letter Grade*

RDT 155 ANATOMY OF ORAL AND FACIAL STRUCTURES**1 unit**

Enrollment Limitation: *Acceptance in The Restorative Dentistry program*

Anatomical structures of the human head (skull) and face as well as intraoral anatomy in relation to the fabrication of fixed and removable restorative dental prostheses. Detailed emphasis of the bony anatomy of the skull, muscles of mastication, depressor muscles of the mandible, muscles of facial expression, intraoral soft tissue anatomy, and structures of the temporomandibular joint. Total of 18 hours lecture.

Grade Mode: *Letter Grade*

RDT 160 DENTAL CALCULATIONS, WEIGHTS AND MEASURES**0.5 unit**

Enrollment Limitation: *Acceptance in The Restorative Dentistry program*

Various weight and measure systems commonly used in a fixed and removable restorative dental laboratory. Included are specific dental calculations. Total of 9 hours lecture.

Grade Mode: *Letter Grade*

RDT 201A DIRECTED STUDIES IN BASIC DENTAL LABORATORY TECHNIQUES**1 unit**

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Development and enhancement of basic dental laboratory techniques, skills and concepts for second year students in the Restorative Dental Technology Program. Highly focused studies in second year content. Pass/no pass grading. Total of 54 hours laboratory.

Grade Mode: *Pass/No-Pass*

RDT 201B DIRECTED STUDIES IN ADVANCED DENTAL LABORATORY TECHNIQUES**1 unit**

Recommended Preparation: *Advanced level of understanding and focusing primarily on the specialty of Ortho and Pedodontics*

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Development and enhancement of advanced dental laboratory techniques, skills, and concepts for second-year students in the Restorative Dental Technology Program. Advanced level of understanding and focuses primarily on five specialties, Fixed and Removable Prosthodontics (Complete Dentures) and (Complete Partial Dentures) and Ortho and Pedodontics and Dental Implants. Pass/no pass grading.

Grade Mode: *Pass/No-Pass*

RDT 201C DIRECTED STUDIES IN ADVANCED DENTAL LABORATORY TECHNIQUES II**1 unit**

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Development and enhancement of advanced dental laboratory techniques, skills, and concepts for second-year students in the Restorative Dental Technology Program. Highly focused studies in second-year content. Pass/no pass grading.

Grade Mode: *Pass/No-Pass*

RDT 225A BEGINNING REMOVABLE PARTIAL DENTURES (RPDs)**4 unit**

Enrollment Limitation: *Acceptance in the Restorative Dentistry Program*

Laboratory techniques and procedures required for the fabrication of chrome-cobalt removable partial denture (RPD) frameworks. Emphasis is on designing rationale and correct application of various RPD components. Total of 36 hours lecture and 108 hours of laboratory.

Grade Mode: *Letter Grade*

RDT 225B ADVANCED REMOVABLE PARTIAL DENTURES (RPDs)**3 unit**

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Laboratory procedures and theory for seating metal chrome-cobalt RPD castings to their respective master casts. Design and fabrication of an injection molded flexible RPD.. Designing of a digital RPD using computer-aided-design (CAD) design software and overview of laboratory procedures for a fabricating a Swing-Lock RPD. Total of 18 hours lecture and 108 hours laboratory.

Grade Mode: *Letter Grade*

RDT 230A INTERMEDIATE ADVANCED FIXED PROSTHODONTICS
5 unit

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Complex model and die preparation and cast evaluation for metal-ceramic, pressed, and milled ceramic cases, physical characteristics of dental porcelain, and components of the metal-ceramic restoration. Design and construction of single unit/tooth substructures (substrates) for metal-ceramic restorations as well as pressed and milled ceramic restorations utilizing computer-aided-design (CAD) and computer-aided-manufacture (CAM) technologies as well as difference between pressable ceramic and conventional porcelain systems. Total of 36 hours lecture and 162 hours laboratory.

Grade Mode: *Letter Grade*

RDT 230B ADVANCED FIXED PROSTHODONTICS
5 unit

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Theory and laboratory techniques for fabricating metal-ceramic crown and. Multi-unit substrate designs using traditional analog/manual wax design technique and also using computer-aided-design (CAD) software. Firing procedures using the porcelain furnace and inputting firing parameters into the furnace. Total of 36 hours lecture and 162 hours laboratory.

Grade Mode: *Letter Grade*

RDT 235A FUNCTIONAL OCCLUSION AND ARTICULATOR INSTRUMENTATION
2.5 unit

Course focuses on the physiology of functional mandibular movement and advanced articulator instrumentation. Topics include; basic terminology/nomenclature associated with the study of occlusion, cusp positions in Maximum Intercuspatation (MI) including cusp-to-marginal ridge and cusp-to-fossa patterns of occlusion, mandibular movements, functional articulations, types of articulator instruments (hinge, semi-adjustable, and fully adjustable), and parts of a semi-adjustable articulator instrument. Total of 27 hours lecture and 54 hours laboratory.

Grade Mode: *Letter Grade*

RDT 235B ADVANCED FUNCTIONAL OCCLUSION AND BIOMECHANICS OF THE MASTICATORY SYSTEM
2.5 unit

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Intense study of the components of the stomatognathic system and how each corresponds to functional occlusion. Detailed review of the functional components of anterior and posterior teeth, analysis of the difference between malocclusion, normal occlusion. Laboratory projects involve learning to design and recognize various functional occlusion types: bilaterally balanced, unilaterally balanced, cusp-fossa and mutually protected occlusions. Total of 27 hours lecture and 54 hours laboratory.

Grade Mode: *Letter Grade*

RDT 240 ADVANCED DIGITAL DENTISTRY CAD CAM III
1.5 unit

Recommended Preparation: *Basic computer operating experience, power on/off, saving files on USB drive*

Focus on rapid prototype 3-D printing; laser sintered technology and generative computer-aided-manufacturing (CAM) processes. Included are usage of 3-D software to create study casts, 3-D fabrication of laboratory models and dies, operation and maintenance of the 3-D printer, and generating transferable files in .stl format that will be exported to the 3-D Printer. Laboratory projects. Total of 9 hours lecture and 54 hours laboratory.

Grade Mode: *Audit, Letter Grade*

RDT 245 ORTHODONTICS AND PEDODONTICS
3 unit

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Basic principles and laboratory procedures for the fabrication of digital and stone orthognathic study casts (models) that meet with criteria as set forth by the American Board of Orthodontics (ABO). Design and fabrication of orthodontic and pedodontic fixed and removable appliances. Laboratory projects include active and passive removable appliances such as the Hawley retainer, fixed space maintainer, arch expanders, inclined plane, space-closing or space-regaining appliances with expansion screws. Total of 27 hours lecture and 81 hours laboratory.

Grade Mode: *Letter Grade*

RDT 250 LABORATORY BUS. MGMT/ ADMIN, LEGALITIES, ETHICS AND JURISPRUDENCE
1 unit

Enrollment Limitation: *Acceptance in The Restorative Dentistry program*

Ethics, laws, federal and state regulations, and industry organizations governing the practice of restorative dental laboratory technology and the professional relationship of dentists and dental technologists. Development of the components of a business plan, marketing plan, business management/organizational plan and human resource management system. Computerized dental laboratory business management software. State and national professional dental technology organizations, the Certified Dental Technician (CDT), Recognized Graduate (RG), and Certified Dental Laboratory application requirements and procedures, benefits, and continuing education requirements. Maximum credit for DLT 124 and RDT 250 is 2 units. Total of 18 hours lecture.

Grade Mode: *Letter Grade*

RDT 255 INTRODUCTION TO DENTAL IMPLANTS

2 unit

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Introduction to dental implants, an overview of the steps involved in implant surgery and laboratory procedures for fabricating single tooth fixed implant prosthetics. Use of the articulator during fabrication of implant prostheses, and provisional or interim implant prostheses single-unit/tooth screw-retained implant prostheses. Includes an overview of digital computer-aided-design (CAD) for implant prosthetics using Implant Studio software overdenture. Total of 18 hours lecture and 54 hours laboratory.

Grade Mode: *Letter Grade*

RDT 260 TRANSITION TO THE RESTORATIVE DENTAL TECHNOLOGY PROFESSION

1.5 unit

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Preparation for written and practical components of the Certified Dental Technician Examination given by the National Bureau for Certification in Dental Technology. Course may also be taken for possible job advancement. Total of 9 hours lecture and 54 hours laboratory.

Grade Mode: *Letter Grade*

RDT 265 CLINICAL EXPERIENCE

3 unit

Enrollment Limitation: *Acceptance in the Restorative Dentistry program*

Emphasis on having the student demonstrate and practice. Includes participation in the fabrication of dental prostheses for patients currently under treatment or from actual casts or impressions. Completion of detailed Work Journals and signed Attendance Sheets at laboratories is required. It is expected that students shall provide their own private transportation to clinical laboratory sites. Total of 18 hours lecture and 108 hours laboratory.

Grade Mode: *Letter Grade*