

The logo of the D.U.H.S. (Dental University of Health Sciences) is a circular emblem. The outer ring contains the text "DENTAL UNIVERSITY OF HEALTH SCIENCES" in a serif font, with a small star on the left and right sides. Inside the circle is a stylized illustration of a dental chair and a dental X-ray machine. Below the circle is a ribbon banner with the letters "D.U.H.S." in a bold, sans-serif font.

**Disciplinary Foundation Courses
(Common Courses for
Dental Technology and Dental Hygiene
Programs)**

Title of Course	RESEARCH AND EVIDENCE BASED LEARNING
Course Code	DCP-REB 203
Duration	2 clock hours a week
Campus/ Location Office	OJHA campus
Total Credit Hours	2 Cr. Hours
Accredited by	ALLIED HEALTH PROFESSIONAL COUNCIL OF PAKISTAN

COURSE INTRODUCTION:

To fulfil the current **DISCIPLINARY RESEARCH AND FOUNDATIONAL COURSE REQUIREMENTS** of the Higher Education Commission, this course has been introduced in the BS Programs to get the students acquainted with the Subject-based research skills, quantitative reasoning and evidence-based practices in dental auxiliary sciences. This course is placed in Semester – III and is common for both Dental Hygiene and Dental Technology Programs.

COURSE OBJECTIVES:

The students will be able to:

1. Understand the basics of health research and study designs
2. Able to infer and interpret the conclusion based on results of the basic research
3. Able to read and understand the available pool of research
4. Use research results for evidence-based practice

COURSE PLAN

WEEK	LESSON TOPIC	TEACHING/ ASSESSMENT METHOD
1.	Getting Started: Thinking like a scientist What is evidence-based practice and learning	Teaching methods will include: 1. Large classroom teaching 2. Small group discussions for the completion of Self-Study Assignments for the formulation of focused questions 3. Hands-on practices for searching articles on relevant questions 4. Small group activities for the completion of small research projects 5. Classroom activity to present critical appraisal of articles including following study designs: - Cross sectional study - Case control study - Cohort study
2.	Research types and designs Discussing ideas, resources and ethics	
3.	Descriptive research methods Defining objectives Generating hypothesis	
4.	Analytical research methods Usefulness of formulating a well-structured question Formulating focused questions using PICO components and its variations Example: Therapy questions Diagnostic test questions Prognosis questions Questions on harms	
5.	Finding the current best practices Searching for good articles	
6.	Sampling methods Need for control group Randomization	
7.	Concepts of p-value Why necessary to start with null hypothesis	

	Testing hypothesis	- Randomized controlled trial - Systematic review
8.	What is confidence interval How do you interpret confidence interval	
	Mid-term exam	
9.	Logic of two group experimental research design Concept of Quasi-experimental and single case design	
10.	Critical appraisal techniques Measuring the effects of treatment	
11.	Interpreting results Odds ratio and relative risks	
12.	Systematic reviews and meta-analyses	
13.	Small group project completion	
	Revision	

LEARNING RESOURCES AND TEXTBOOKS:

1. Research methods and statistics- a critical thinking approach by Sherri L Jackson, 3rd edition (availableonline free download)
2. Fundamentals of Evidence Based Medicine by Kameshwar Prasad 2nd Edition, Springer
3. Dental Statistics made Easy by Nigel C Smeeton 3rd Edition (Available online) CRC Press

Title of Course	DENTAL PHARMACOLOGY
Course Code	DCP-DPHAR 304
Duration	2 clock hours a week
Campus/ Location Office	OJHA campus
Total Credit Hours	2 Cr. Hours
Accredited by	ALLIED HEALTH PROFESSIONAL COUNCIL PAKISTAN

COURSE INTRODUCTION:

To fulfil the **DISCIPLINARY FOUNDATION COURSE REQUIREMENTS** of the Higher Education Commission that include both the foundation courses as well as the major courses.

This course has been introduced in the BS Programs to get the students acquainted with the pharmacological requirements that a Dentist usually encounters in their clinical practice and the dental auxiliaries must understand how they are prescribed and for what purposes, how these drugs may interact with the overall human system and present when they work in close team coordination with a dentist in clinical and laboratory practices. Although dental auxiliaries do not prescribe drugs, knowledge regarding appropriate drugs to prescribe for various indications and properly prepared prescriptions is necessary for several reasons.

The students have already covered the basic pharmacological concepts, including pharmacokinetics and pharmacodynamics. They have already learnt the specific therapeutic agents such as those affecting the autonomic nervous system, central nervous system, and basics of chemotherapeutic and analgesic agents. The Dental Pharmacology will provide specific details for the drugs used in dental practice that particularly include the anti-microbials and anti-inflammatory agents. This will also lay foundation for the students' understanding about excessive use of drugs, necessary requirements and concept of microbial resistance. How dental restoration is important over the excessive use of unnecessary drugs is the foundation understanding that the students will develop in this course.

This course that is placed in 2nd year semester – IV and is a foundation course common for both the BS-DCP programs that is Dental Hygiene & Dental Technology so will be taught in a common classroom including students of both the programs.

COURSE OBJECTIVES:

At the completion of this course students will be able to:

1. Recall the basic concepts in pharmacology relevant to patient healthcare
2. Recall and understand the basics of drugs administration, Distribution and mechanism of drugs action and its interaction with biological system and drug also used in routine relevant to dental practice
3. Summarize and understand the mode of actions of drugs that may alter dental treatment
4. Identify drugs used in dental emergencies

COURSE PLAN

WEEK	LESSON TOPIC
1 Unit-1: Basic Pharmacology	Recall the concepts of Pharmacokinetics and Pharmacodynamics Absorption, Routes of Administration
2 Unit-1: Basic Pharmacology	Recall the basic concepts of Distribution, Drug Metabolism, Bioavailability, Therapeutic Index and elimination of drugs
3 Unit-2: Analgesics used in	<u>Narcotic Analgesics</u> e.g., Morphine, Opioids Analgesics & Antagonists, Codeine, Hydrocodone, pethidine, Naloxone etc.

dental pain	Non-Narcotic Analgesics NSAIDs e.g., Aspirin, Diclofenac, Sodium, Brofen, Naproxen etc. Paracetamol etc.
4 Unit-3: Drugs Affecting CNS	Side-effects of use of Anxiolytic & Hypnotic Drugs i.e., Benzodiazepines, Barbiturates etc. Anesthetic Drugs, Drugs used to treat Epilepsy Availability and usage of anesthesia in dental practice – both topical and systemic Availability and usage of nitrous oxide gas in dental practice Importance of history of drugs used in CNS conditions by patients requiring dental treatment and prosthesis
5 Unit-4: Anti-microbiotics	Concept of microbial and drug resistance Difference between Bacteriostatic vs Bactericidal Drugs Importance and role of Prophylactic Antibiotics in dental practice Management and Complication of Rx
6 Unit-4: Anti-microbiotics	Anti TB Drugs, Antifungal, Inhibitors of cell wall Synthesis i.e. (Penicillin, Cephalosporin etc.), Folate Antagonists (Sulfonamide, Antiviral drugs Role of these drugs in dental management and effects of over-usage
7 Unit-5: Drugs affecting CVS	Importance of medical history in the context of drugs used for CVS conditions Identify the names of common medicines used as Antianginal Drugs, Antihypertensives, Anticoagulants, and Thrombolytic agents used in anticoagulation and treatment of Anemia Importance and role of important mineral supplements
8	Revision
	MIDTERM EXAMINATION
9 Unit-6: Drugs Effecting GIT	Drugs used to treat Peptic Ulcer Antidiarrheals, Laxatives
10 Unit-7: Autonomic Nervous System	Emergency Drugs used in Dental treatment including drugs acting on parasympathetic system and sympathetic system
11 Unit-8: Drugs Effecting Respiratory System	Drug to treat Asthma i.e., Beta-Adrenergic agonists, Corticosteroids, Drugs used to treat cough (COPD) etc. Availability of emergency drugs in dental practice and their applications
12 Unit-9: Insulin & Oral Hypoglycemics	Introduction to Diabetes Role of Insulin, Insulin preparation Role of Oral Hypoglycemics
13 Unit-10: Steroid Harmons	Estrogen, Progesterone, Androgens, Corticosteroids etc.

LEARNING RESOURCES AND TEXTBOOKS:

1. Lippincott, 7th Edition
2. Basic Principles of Pharmacology with dental hygiene applications by Frieda Atherton Pickett & Geza Terezhalmy, Lippincott Williams & Wilkins (Available online/ free downloads)
3. Oral Pharmacology for the dental hygienists by Mea A Weinberg, Cheryl Westphal, James Burke Fine, 2nd Edition (Available online/ free downloads)

Title of Course	ORAL ANATOMY AND TOOTH MORPHOLOGY
Course Code	DCP-OANA 304
Duration	8 clock hours a week (2 hours lecture followed by 6 hours of laboratory hands-on practice)
Campus/ Location Office	OJHA campus
Total Credit Hours	4 Cr. Hours (2 + 2)
Accredited by	ALLIED HEALTH PROFESSIONAL COUNCIL PAKISTAN

COURSE INTRODUCTION:

To fulfil the **DISCIPLINARY FOUNDATION COURSE REQUIREMENTS** of the Higher Education Commission that include both the foundation courses as well as the major courses. This course has been introduced in the BS Programs to get the students acquainted with the oral and dental anatomy that may be helpful to the dental auxiliaries when they work in close coordination with a Dentist in clinical practice.

Oral Anatomy and Tooth Morphology is a basic foundation course that is placed in 2nd year semester IV and is a foundation course for both the BS-DCP programs that is Dental Hygiene & Dental Technology so will be taught in a common classroom including students of both the programs.

COURSE OBJECTIVES:

At the completion of this course students will be able to:

1. Learn and understand the development of the anatomical oral structures, tissues and organs of human and their inter-relationship
2. Learn the basic concepts of dental occlusion
3. Identify different oral anatomical features including dentitions based on nomenclature, chronology, morphology, physiology and other distinguishing features.
4. Identify the human age and gender based on the anatomical and morphological dental structures and eruption timings of the dentition
5. Practice the three numbering systems-Universal, Palmer Notation, and International
Correctly identify soft tissue and hard tissue landmarks of the oral cavity, lips and face including salivary glands and intraoral location

COURSE PLAN

WEEK	LESSON TOPIC	TEACHING/ ASSESSMENT METHOD
1.	Introduction to the Oral Biology Basics of Head and Neck Structures Osteology of Jaws and Skull	Practice and draw diagrams
2.	Muscles of Mastication Muscles of Facial Expression	Practice and draw diagrams
3.	Lymphatic Drainage of Head & Neck	Labelling and project making
4.	Cranial Nerves	Labelling and project making
5.	General Embryology Branchial Apparatus	Practice and draw diagrams
6.	Development of Face Development of Palate & Mandible	Practice and draw diagrams
7.	Temporo-Mandibular Joint- Development, Structure and Functions	Practice and draw diagrams
8.	Development of Teeth- Primary and Permanent	Practice on tooth numbering systems

9.	Mid-term exam	
10.	Intraoral and Extra oral structures Introduction to Tooth Morphology	Plaster models, wax carving and making graphs
11.	Primary and Permanent Dentition Dentine, Enamel and Pulpal tissues	Plaster models, wax carving and making graphs
12.	Periodontal Apparatus Gingival structure Periodontal fibers arrangement	Plaster models, wax carving and making graphs
13.	Bone Cementum	Making projects
14.	Oral Mucosa Salivary Glands	
	FINAL EXAM	

LEARNING RESOURCES AND TEXTBOOKS:

1. Orban's oral histology and embryology, by S N Bhaskar, G S Kumar, 14th edition Elsevier (available online free downloads)
2. Woelfel's dental anatomy by Rickne C Schied and Gabriela Weiss, 8th edition Lippincott Williams and Wilkins (available online free downloads)
3. Wheeler's Dental anatomy, physiology and occlusion by Nelson Ash 9th edition, Saunders (available online free downloads)

Title of Course	DENTAL MATERIALS-I
Course Code	DCP-DMENT 314
Duration	8 clock hours a week (2 hours lecture followed by 6 hours of laboratory hands-on practice)
Campus/ Location Office	OJHA campus
Total Credit Hours	4 Cr. Hours (2 + 2)
Accredited by	ALLIED HEALTH PROFESSIONAL COUNCIL PAKISTAN

COURSE INTRODUCTION:

To fulfil the **DISCIPLINARY FOUNDATION COURSE REQUIREMENTS** of the Higher Education Commission that include both the foundation courses as well as the major courses. This course has been introduced in the BS Programs to get the students acquainted with the types of dental materials the Dentist usually sees and work with in their clinical practice. Since the dental auxiliary/ dental care professionals work in close collaboration with the Dentist they must understand how these materials are identified, manipulated, handled in clinic and in laboratory. What are their physical, chemical, thermal and rheological properties so that a more efficient 4-handed dentistry may be practiced for the overall patient management in dental practice.

Dental Materials is a lengthy subject therefore this course has been divided into two parts. It is a basic foundation course that is placed in 2nd year as well as in the 3rd year in semester IV and V respectively and is a foundation course for both the BS-DCP programs that is Dental Hygiene & Dental Technology so will be taught in a common classroom including students of both the programs.

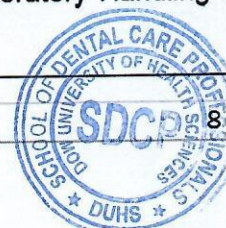
COURSE OBJECTIVES:

At the completion of this course students will be able to:

1. Learn and understand the physical and the chemical properties and effects of different dental materials used in dental clinical and laboratory practices
2. Learn and understand the composition, powder-liquid ratios, timings during manipulation and harmful effects of different materials used in clinical and laboratory dental practice.
3. Practice mixing and manipulation of different dental materials used in clinical and laboratory dental practices

COURSE PLAN

WEEK	LESSON TOPIC	TEACHING/ METHOD	ASSESSMENT
1.	General properties of dental materials Physical properties Mechanical properties Chemical properties Thermal properties Adhesive properties Rheological properties	Written assignments	
2.	Gypsum products	Practice plaster slabs	
3.	Dental waxes	Identification of different waxes	
4.	Introduction to impression materials Classification of impression materials Hydrocolloid impression materials	Clinical and laboratory Handling and manipulation	



5.	Elastomeric Impression materials Non-Elastomeric Impression materials	Clinical and laboratory Handling and manipulation
6.	Introduction to restorative materials	Written assignments
7.	Dental amalgam	Laboratory practice
8.	Mid-term exam	
9.	Adhesive restorative materials	Clinical and laboratory Handling and manipulation
10.	Resin based filling materials	
11.	Glass Ionomer Cements	
12.	Dental cements	
13.	Endodontic materials	Identification of different materials
14.	Finishing and polishing materials.	
	FINAL EXAM	

LEARNING RESOURCES AND TEXTBOOKS:

1. Applied Dental Materials (John McCabe, Angus W. G. Walls)
2. Phillip's Science of Dental Materials by Kenneth J Anusavice, Chiayi Shen, H Ralph Rawls 12th Edition Elsevier (available online free downloads)

Title of Course	INTRODUCTION TO PROSTHODONTICS
Course Code	DCP-INTPR 304
Duration	7 clock hours a week (1 hour lecture followed by 6 hours of clinical/ laboratory hands-on practice)
Campus/ Location Office	OJHA campus
Total Credit Hours	3 Cr. Hours (1 + 2)
Accredited by	ALLIED HEALTH PROFESSIONAL COUNCIL PAKISTAN

COURSE INTRODUCTION:

To fulfil the current **DISCIPLINARY FOUNDATION COURSE REQUIREMENT** of the Higher Education Commission, this course has been introduced as a common course for both dental hygiene and dental technology programs. This course is placed in semester – IV where the students of both the programs understand the importance of prosthodontic practice both under the domain of clinical hygiene and laboratory-based technology. This will develop a coordination between the dentist and the dental lab technologist where the hygienist plays a role of coordination so that the final prosthesis made is appropriately fit for the elderly patients.

Prosthetic replacement of teeth, occlusion, functionality and aesthetics are some of the challenges that dentists face when treating elderly patients. Dental Hygienists play their role in counselling such patients in difficult situation in communicating the patient needs to the dental technologists. This course will fulfil this particular requirement and help through a coordinated dental prosthodontics practice.

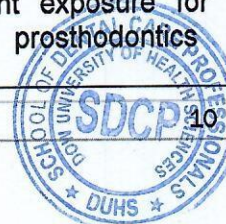
COURSE OBJECTIVES:

At the completion of this course students will be able to:

1. Learn and understand the basics of Prosthodontic paraclinical practice
2. Define different terminologies and classifications used in clinical and laboratory-based prosthodontics
3. Know the differences between structure and functions of various types of dental prosthesis
4. Recognize different methods, materials and equipment required for different types of dental prosthesis in clinical and laboratory practices
5. Conduct structured interview with the patient (and/or patient companies) to define patients' chief complaints and treatment needs
6. Take a complete medical and dental history and perform extraoral and intraoral examination

COURSE PLAN

WEEK	LESSON TOPIC	TEACHING/ ASSESSMENT METHOD
1.	Basics of gerontology Tooth loss and age, factors responsible Consequences of tooth loss Introduction to Prosthodontics Classification of Prosthodontics History taking and interviewing methods	A 45-minutes classroom lecture followed by a practical orientation of: - Prosthodontic clinic with patients identified with prosthetic needs. - Students learn basic interaction between a dentist and patient and how dental hygienists and dental technologists play their role in the clinic. Patient exposure for history taking in prosthodontics under supervision
2.	Classification of different type of Prosthesis Types of oral reconstructions Overview of rehabilitation of natural teeth Occlusion terminologies and definition	



3.	Introduction to dental prosthetic laboratories Different Terminologies used in Prosthodontics Clinical and laboratory assessments and procedures	A 45-minutes classroom lecture followed by a practical orientation of: - Laboratory exposure for instrument and material handling and manipulation under supervision
4.	Different instruments and equipment used in prosthodontics laboratory	
5.	Different instruments and equipment used in prosthodontics clinics Selection of trays Basics of impressions Analogue and digital impressions	A 45-minutes classroom lecture followed by a practical orientation of: - Clinical patient exposure for instrument and material handling and manipulation under supervision
6.	Class test	Clinical and laboratory assessment
7.	Basics of photography Tooth color and shades requirements	Patient exposure for impression taking in prosthodontics under supervision
8.	Disinfection and sterilization in prosthodontics	Practice clinical based and laboratory-based disinfection and sterilization
9.	MID TERM	
10.	Models for prosthodontics - I: Basics about dental impressions and impression taking techniques and basic procedures Casting primary impressions Boxing in impressions	4- weeks split group rotations in different relevant dental OPDS to identify and record cases Collecting and making study models
11.	Basics of reconstruction of maxilla Prosthodontics for cleft lip and palate Basics of reconstruction of mandible and other facial structures	
12.	Models for prosthodontics – II: Models for cobalt-chromium frameworks Casting working (secondary impressions) Sectional models using customized trays Sectional models using pinned system	
13.	Articulating models Occlusal registration records	
14.	Retention of prosthesis Parts of different types of prostheses	Completion of quota deficit
15.	REVISION	Logbook submission

LEARNING RESOURCES AND TEXTBOOKS:

1. McCracken's Removable partial prosthodontics by Alan B Carr and David T Brown 13th edition Elsevier (first 3 chapters)
2. Basics of dental technology – a step-by-step approach by Tony Johnson, David G Patrick et al. Publisher: Wiley Blackwell (limited to introduction of the common topics for Dental Hygiene and Dental Technology programs)

Title of Course	ORAL PATHOLOGY
Course Code	DCP-OPATH 305
Duration	2 clock hours a week (2 hours classroom teaching/ lecture)
Campus/ Location Office	OJHA campus
Total Credit Hours	2 Cr. Hours (2 + 0)
Accredited by	ALLIED HEALTH PROFESSIONAL COUNCIL PAKISTAN

COURSE INTRODUCTION:

To fulfil the **DISCIPLINARY FOUNDATION COURSE REQUIREMENTS** of the Higher Education Commission that include both the foundation courses as well as the major courses. This course has been introduced in the BS Programs to get the students acquainted with the oral lesions and poor conditions that a Dentist usually sees in their clinical practice and the dental auxiliary must understand how they present when they work in close team coordination with a dentist in clinical and laboratory practices.

Oral Pathology is a basic foundation course that is placed in 3rd year semester V and is a foundation course for both the BS-DCP programs that is Dental Hygiene & Dental Technology so will be taught in a common classroom including students of both the programs.

COURSE OBJECTIVES:

At the completion of this course students will be able to:

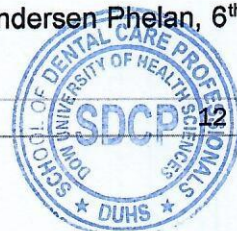
1. Able to recognize the most important features of common oral diseases and
2. Able to employ the mechanism of the disease in understanding its prevention and management

COURSE PLAN

WEEK	LESSON TOPIC
1.	Dental Caries - Etiology, pathology and zones of enamel caries
2.	Periapical pathology, Abscess
3.	Diseases of periodontium
4.	Salivary gland disease, Classification, Reactive lesions, Sialadenitis, Benign & malignant lesions
5.	Cysts of Jaw
6.	Soft tissue cysts
7.	Odontogenic lesions
8.	Revision
9.	MIDTERM EXAMINATION
10.	White lesions
11.	Red & blue lesions
12.	Developmental disorders
13.	Genetic syndromes
14.	Class test
15.	Revision

LEARNING RESOURCES AND TEXTBOOKS:

1. General and Oral pathology for the dental hygienists (only Part-2) by Leslie DeLong, Nancy W. Burkhart Lippincott Williams & Wilkins (available online free downloads)
2. Oral pathology for the dental hygienists by Olga A C Ibsen, Joan Andersen Phelan, 6th Edition Elsevier (available online free downloads)



Title of Course	INFECTION CONTROL AND BIOHAZARD MANAGEMENT IN DENTISTRY
Course Code	DCP-ICBIO 305
Duration	7 clock hours a week (1 hour classroom teaching/ lecture followed by 6 hours of clinical and laboratory-based infection control practices in dentistry)
Campus/ Location Office	OJHA campus
Total Credit Hours	3 Cr. Hours (1 + 2)
Accredited by	ALLIED HEALTH PROFESSIONAL COUNCIL PAKISTAN

COURSE INTRODUCTION:

To fulfil the **DISCIPLINARY FOUNDATION COURSE REQUIREMENTS** of the Higher Education Commission that include both the foundation courses as well as the major courses. This course has been introduced in the BS Programs to get the students acquainted with the most concerning and pressing issue in Clinical Dental Practice and that is cross infection control and biohazard management. Four-handed dental practice is promoted while considering this most important issue and that is patient and dentist safety. Dental auxiliary must understand how such issues may present and how they should deal with it while they work in close team coordination with a dentist in clinical and laboratory practices.

Infection Control and Biohazard Management in Dentistry is a basic foundation course within dental discipline that is placed in 3rd year semester V and is a foundation course for both the BS-DCP programs that is Dental Hygiene & Dental Technology so will be taught in a common classroom including students of both the programs. This course is developed in-line with the CDC guidelines for infection control in dental healthcare settings, OSHA bloodborne pathogen standards and the Guidelines from NHSRC of Government of Pakistan.

COURSE OBJECTIVES:

At the completion of this course students will be able to:

1. Learn and understand the principles of infection control in general and in dental practices
 2. Practice minimizing the transmission of healthcare associated infections in general and in dental practice and dental laboratory
 3. Recognize the sources and modes of spread of infectious diseases, their prevention from spread and reporting system.
- Learn and understand the basic principles of waste disposal and biohazard management

COURSE PLAN

WEEK	LESSON TOPIC	TEACHING/ ASSESSMENT METHOD
1.	Basic principles of infection control Universal Precautions Personal protective equipment	Identify different types of dental instruments Learn different patient screening methods who could be source of infections
2.	Principles and types of Gloving and Double-gloving, Cross-Infections in Dental practices Impact of cross infection in practice	Identify and practice use of PPEs in the dental practices



3.	Prevention of cross-infections in dental practices Principles and measures, Hand-hygiene, Respiratory hygiene, Cough etiquette	Learn and practice on different sterilization in disinfection equipment and materials in labs and clinics
4.	Disinfection and uses of disinfectants Functions and methods of disinfection	Learn and practice on different sterilization methods and measures in disinfection in labs and clinics
5.	Sterilization Functioning and methods of sterilization	Practice sterilization and disinfection in split groups in clinics and labs
6.	Environmental infection prevention and control	
7.	Radiological hazards and preventive measures	
8.	Infection control in the laboratory Receiving area requirements Disinfection of dental impressions	
9.	Mid-term exam	
10.	Principles of biohazard and safety Blood-borne diseases and prevention	Practice hand hygiene, proper gloving and sharps safety and reporting systems throughout semester in split groups in different clinics and labs
11.	Clinical safety, Safe injection practices, Sharps safety, Handling of sharps, Bio-hazard box	
12.	Safety in laboratory Housekeeping in dental laboratory Personal protection in laboratory (eyes, hands, hair, clothing, instruments etc.)	
13.	Lathe and rotary attachments, Heat sources, electrical connections, airborne dust and fumes, Exposure precautions, Laboratory barrier system	
14.	First aid and basic life support techniques	
15.	Revision	

LEARNING RESOURCES AND TEXTBOOKS:

1. Safety Standards and Infection Control for Dental Hygienists by Ellen Dietz & Raula Badavinac
2. CDC Guideline for infection control for dental health care professionals
3. Infection control management by NHSRC Pakistan
4. (For waste management and infection control) Essentials of Management for healthcare professionals by Hari Singh Taylor & Francis Press (available online free downloads)
5. (For dental technology) Dental laboratory technology- basic sciences, removable prosthodontics and orthodontics (available online free download)

Title of Course	ORAL SCREENING AND DIAGNOSIS
Course Code	DCP-SDIAG 305
Duration	7 clock hours a week (1 hour classroom teaching/ lecture followed by 6 hours of clinical and community-based screening services in dentistry)
Campus/ Location Office	OJHA campus
Total Credit Hours	3 Cr. Hours (1 + 2)
Accredited by	ALLIED HEALTH PROFESSIONAL COUNCIL PAKISTAN

COURSE INTRODUCTION:

To fulfil the **DISCIPLINARY FOUNDATION COURSE REQUIREMENTS** of the Higher Education Commission that include both the foundation courses as well as the major courses. This course has been introduced in the BS Programs to get the students acquainted with the oral screening and basic identification/ diagnosis of the common oral health conditions. Also, the dental auxiliary must understand what a Dentist usually sees in their clinical practice and the dental auxiliary must understand how they present when they work in close team coordination with a dentist in clinical and laboratory practices.

Oral Screening and Diagnosis is a basic foundation course in the dental discipline that is placed in 3rd year semester V and is a foundation course for both the BS-DCP programs that is Dental Hygiene & Dental Technology so will be taught in a common classroom including students of both the programs. The purpose of this course is to make the students identify and differentiate between normal and abnormal facial, oral and dental structures through screening and develop differential and provisional diagnosis by interpreting and correlating findings based on thorough history taking and clinical examination and refer the patient/ cases to specialists for further definitive diagnosis.

COURSE OBJECTIVES:

At the completion of this course students will be able to:

By the end of this course the student will be competent to:

1. Take extensive history and understand the needs and demands of the patients to be further communicated and referred for the specialist care
2. Learn and understand the effects of risk factors (such as tobacco etc.) on the oral mucosa and overall poor oral health effects
3. Learn and understand the oral manifestations of systemic diseases and other physiological changes in the body (such as aging, pregnancy etc.)
4. Learn and understand the signs and symptoms of acute oral infections and other acute conditions to be referred for further specialist management and care
5. Be able to identify different types of pain, discomfort and neuralgia and their possible/ differential causes

Able to screen different general pathological conditions and differentiate them with normal conditions

COURSE PLAN

WEEK	LESSON TOPIC	TEACHING/ METHOD	ASSESSMENT
1.	Introduction to screening Types of screening Detection and documentation - Tools for screening	Split group rotation in Oral Diagnosis Department and Screening OPDs for screening, history taking, clinical observations and assistance	
2.	Principles of history taking		

	Extra-oral and intra-oral soft tissue head and neck screening examination	
3.	Basics of clinical and paraclinical assessment Soft tissue head and neck pathologies – description and documentation	
4.	Common oral tissue lesions, and their common manifestations - Dental tissues Types of screening tools and clinical tests available	
5.	Common oral tissues lesions and their common manifestations - Soft tissues Types of screening tools and tests available	
6.	Common oral tissues lesions and their common manifestations - Bone, joints and sinuses Types of screening tools and tests available	
7.	Class test / quiz – sample patient histories and discussions	
8.	Common manifestations associated with systemic conditions and other disorders	
9.	Mid-term exam	
10.	Differential diagnosis of common oral soft tissue lesions	Split group rotation in Oral Diagnosis Department and Screening OPDs for screening, history taking, clinical observations and assistance
11.	Oral changes in old age Causes of signs and symptoms	
12.	Common radiological changes Meaning of radiolucency and opacities on radiographs	
13.	Step by step Screening of oral cancers Guidelines for observation and / or referral of patients' lesions	
14.	How to present Differential tables - common conditions and syndromes	
15.	Final examination	

LEARNING RESOURCES AND TEXTBOOKS:

1. ADA practical guide to soft tissue oral disease by Michael A Kahn and Michael Hall. Published by Wiley Blackwell
2. Jaypee's Dental diseases differential diagnosis by Priya Verma Gupta (available online free downloads)

Title of Course	DENTAL MATERIALS-II
Course Code	DCP-DMENT 325
Duration	8 clock hours a week (2 hours classroom teaching/ lecture followed by 6 hours of laboratory-based pre-clinical and para-clinical/ laboratory auxiliary/assistance practices)
Campus/ Location Office	OJHA campus
Total Credit Hours	4 Cr. Hours (2 + 2)
Accredited by	ALLIED HEALTH PROFESSIONAL COUNCIL PAKISTAN

COURSE INTRODUCTION:

To fulfil the **DISCIPLINARY FOUNDATION COURSE REQUIREMENTS** of the Higher Education Commission that include both the foundation courses as well as the major courses. This course has been introduced in the BS Programs to get the students acquainted with the types of dental materials the Dentist usually sees and work with in their clinical practice. The dental care professionals must work in close collaboration with the Dentist and understand how these materials are identified, manipulated, handled in clinic and in laboratory. What are their physical, chemical, thermal and rheological properties so that a more efficient 4-handed dentistry may be practiced for the overall patient management.

Dental Materials is a lengthy subject therefore this course has been divided into two parts. It is a basic foundation course that is placed in 2nd year as well as in the 3rd year in semester IV and V respectively and is a foundation course for both the BS-DCP programs that is Dental Hygiene & Dental Technology.

COURSE OBJECTIVES:

At the completion of this course students will be able to:

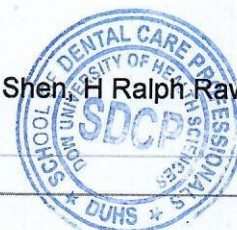
1. To learn and understand the handling, manipulation, uses and applications of different materials used in dental laboratories and clinical practice

COURSE PLAN

WEEK	LESSON TOPIC	TEACHING/ ASSESSMENT METHOD
1.	Introduction to metals and alloys	Wire bending exercises
2.	Wires and metals used in dentistry	Wire bending exercises
3.	Noble metal alloys	Material identification
4.	Wrought alloys	Laboratory exercise
5.	Base metal alloys	Laboratory exercise
6.	Casting alloys	Learning skills in lab and auxiliary practice
7.	Casting Procedures and Techniques	
8.	Investment materials	
9.	Mid-term exam	
10.	Introduction to ceramics	Material identification, Learning skills in lab and auxiliary practice, Learning manipulation skills, and Fabrication trays and clinical exercises
11.	Dental ceramics	
12.	Porcelain	
13.	Introduction to Polymers	
14.	Denture base materials	
15.	Denture lining materials	

LEARNING RESOURCES AND TEXTBOOKS:

1. Applied Dental Materials (John McCabe, Angus W. G. Walls)
2. Phillip's Science of Dental Materials by Kenneth J Anusavice, Chiayi Shen, H Ralph Rawls 12th Edition Elsevier (available online free downloads)



Title of Course	DENTAL RADIOLOGY
Course Code	DCP-DRAD 406
Duration	8 clock hours a week (2 hours classroom teaching/ lecture followed by 6 hours of laboratory-based pre-clinical and para-clinical/ laboratory auxiliary/assistance practices)
Campus/ Location Office	OJHA campus
Total Credit Hours	4 Cr. Hours (2 + 2)
Accredited by	ALLIED HEALTH PROFESSIONAL COUNCIL PAKISTAN

COURSE INTRODUCTION:

To fulfil the **DISCIPLINARY FOUNDATIONAL COURSE REQUIREMENTS** of the Higher Education Commission that include both the foundation courses as well as the major courses. This course has been introduced in the BS Programs of Dental Hygiene as well as of Dental Technology to get the students acquainted with the basic dental radiology practices that are common diagnostic tools to look into the underlying dental requirements to the people who have lost their teeth or who are suffering from dental pain.

Since dental auxiliaries are the main workforce in the Dental team that cater the dental public health needs and requirements and they work in close coordination with the Dentist, it is crucial that they understand the connection between the Body (general Health) and the Mouth (oral health). A good denture is a means for a healthy dietary intake. Therefore, they should learn about the basic dental laboratory procedures and the patient requirement of any kind of dental prostheses that they require.

Dental radiology is a core foundation dental disciplinary course for both auxiliaries- dental hygiene and dental technology and is placed in the 3rd year semester VI.

COURSE OBJECTIVES:

At the completion of this course students will be able to:

1. Understand the basic concepts of X-Rays
2. Understand the hazards involved with the use of X-Ray equipment.
3. Take appropriate precautions in the use and handling of X-Ray equipment.
4. Practice periapical, OPG and PA, lateral view radiographs in chair-side dental radiology practices
5. Identify and differentiate between basic normal and abnormal anatomical structures in the radiographs

COURSE PLAN

WEEK	LESSON TOPIC	TEACHING/ ASSESSMENT METHOD
1. Introduction of Radiography	Radiation – basic principles, history, Discovery and Dangers and Advances	Split group rotations in OPDs and clinics where radiological procedures are carried out (such as Dental Radiology and Operative Dentistry) for clinical observations about:
2.	Uses of radiographs, why? Types of radiations Intra-oral uses and Extra-oral uses	Different chair-side positioning in dental practice for x-rays
3. X-Rays, Equipment, Films & Processing	The dental x-ray machine X-ray machine Components	Methods and time required for

	Control panel	exposure
4.	Image formation Film density and contrast Image detail and definition Image distortion and enlargement	
5.	Image receptors Film size Duplicating film Film – screen combination	
6.	Biological effects of radiation: Interaction of X-rays with matter Effects of ionizing radiation Units of radiation measurement	
7.	Basic concept: Exposure and dose Tissue sensitivity	Split group rotation in Dental Radiology for clinical radiological assistance by learning different intraoral techniques: Full mouth survey using peri-apical and bite-wing x-rays Pediatric full-mouth series Edentulous series
8.	Class test	
MIDTERM EXAMINATION		
9.	Environmental concerns Automatic processing Disinfection and use of barriers Patient protection Equipment and Techniques	Split group rotations in Dental Radiology for x-ray exposure procedures, digital record keeping, developing x-ray in dark room etc. Learn through hands – on practice under supervision techniques such as: Paralleling technique Use of film holders Other accessory techniques such as: Bisecting technique Occlusal projections Extra-oral techniques
10.	Operator dosage and protection Patient concerns and education	
11.	Film processing – the darkroom Design and requirements of the darkroom Development process – manual processing Care and maintenance of darkroom	
12.	Introduction of panoramic radiography Pantomogram, panoramic tomography	
13.	Radiography of the temporomandibular joint Transcranial TMJ projection Sub-mento-vertex (Basilar) projection Panoramic projection Conventional tomography	
14.	Digital imaging techniques Types of digital systems Advanced imaging techniques: Computed tomography Magnetic Resonance imaging	
FINAL EXAM		

LEARNING RESOURCES AND TEXTBOOKS:

1. Radiology for the dental professionals, by Herbert and Jeanine. Published by Mosby Elsevier
2. Radiation safety for dental auxiliaries by Dr. Bruno Correa de Azevedo (available online free downloads)
3. Dental CT- Third eye in dental implants by Prachant P Jaju. Jaypee Publisher (available online)

Title of Course	PREVENTIVE AND INTERCEPTIVE ORTHODONTICS
Course Code	DCP-PORTH 407
Duration	8 clock hours a week (2 hours classroom teaching/ lecture followed by 6 hours of laboratory-based pre-clinical and para-clinical/ laboratory auxiliary/assistance practices)
Campus/ Location Office	OJHA campus
Total Credit Hours	4 Cr. Hours (2 + 2)
Accredited by	ALLIED HEALTH PROFESSIONAL COUNCIL PAKISTAN

COURSE INTRODUCTION:

To fulfil the **INTER DISCIPLINARY COURSE REQUIREMENTS** of the Higher Education Commission that include both the foundation courses as well as the major courses. This course has been introduced in the BS Programs of Dental Hygiene as well as of Dental Technology to get the students acquainted with the basic preventive and interceptive methods to manage orthodontic patients for their orthodontic treatment to be successfully completed on time.

Since dental auxiliaries are the main workforce in the Dental team and the Orthodontists that cater the dental health needs and requirements and they work in close coordination with the Dentist, it is crucial that they understand the connection between the Body (general Health) and the Mouth (oral health). A good denture is a means for a healthy dietary intake. Therefore, they should learn about the basic dental laboratory procedures and the patient requirement of any kind of dental prostheses that they require.

The course is placed in 4th year semester VII and is a combined and minor course for both the DCP programs that is Dental Hygiene and Dental Technology.

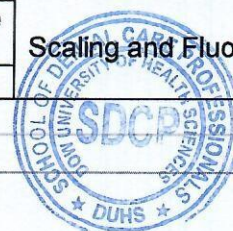
COURSE OBJECTIVES:

At the completion of this course students will be able to:

1. Discuss the rationale of preventive and interceptive orthodontic procedures
2. Identify centric occlusions, centric relations, malocclusions and causes of malocclusions.
3. Identify conditions requiring orthodontic management.
4. Understand the role of removable appliance in growth modifications.
5. Identify the purpose of appliance used in preventive and interceptive orthodontics.
6. Describe the stages involved in fixed and orthodontic therapy.

COURSE PLAN:

WEEK	LESSON TOPIC	TEACHING/ METHOD	ASSESSMENT
1.	Introduction to orthodontics Malocclusion and theory of tooth movements Importance of history taking in orthodontics Index of Orthodontic Treatment Need (IOTN) screening	Clinical observation and assistance under supervision of orthodontists History taking	
2.	Preventive orthodontics Indications for preventive procedures	Need assessment using IOTN	
3.	Various conditions that require preventive procedures	Scaling and Fluoride applications	
4.	Interceptive orthodontics		



	Indications for interceptive procedures	Oral hygiene instructions and maintenance
5.	Various conditions that require interception	
6.	Timings of interceptive procedures	
7.	Premature loss of deciduous teeth	
8.	Effects of premature loss of deciduous teeth	
	Mid-term exam	
9.	Sucking habits Digit sucking	Patient counselling under supervision
10.	Space maintainers – Definition, Classification, Requirements, Indications and contraindications, Purpose of uses	In addition, other procedures may be observed or to be performed under supervision
11.	Serial extractions – Definition, Requirements, Indications and contraindications, Purpose of uses Procedure- Dowel's method, Tweed's method, Nance method	
12.	Submerged, ankylosed, retention of deciduous tooth-Definition, Causes Correction	Taking impressions Preparing models Fitting headgears Inserting arch wires
13.	Extractions in orthodontics - Indications, Enforce extraction	Observe removing adhesive bands
14.	Introduction to the functional and removable appliances Basic Designs and Purposes Retainers Screws Arch wires Springs	
15	Final examination	

LEARNING RESOURCES AND TEXTBOOKS:

1. A to Z Orthodontics- Volume-09- preventive and interceptive orthodontics, by Dr. Mohammad Khursheed Alam (available online)
2. Orthodontic retainers and removable appliances- principles of design and uses by Friedy Luther and Zarana Nelson-Moon (available online- free downloads)