

**CURRICULUM FOR
B.SC (HONS) DENTAL TECHNOLOGY
4 YEARS (8 SEMESTERS)**



THE BACHA KHAN UNIVERSITY CHARSADDA

Website Link : <https://hims.edu.pk>

Download Dental Curriculum Link: <https://hims.edu.pk/curriculum/>

THE BACHA KHAN UNIVERSITY

PREFACE

A university is the zenith of knowledge that imparts quality education and awards degrees for extensive educational attainments in various disciplines. Protection of traditional knowledge. Making exploration about it and obtaining deep understanding about modern technology and research techniques are some of responsibilities of the university. The mission of University is chartered to develop an intellectually conducive environment providing excellence and innovation in education and research to produce competent and community oriented BS Paramedics Health Professionals.

Allied Health Sciences is a field in medicine which has been completely neglected up till now so that there is absolute dearth of trained Allied health personnel who are the actual service providers to the patients, as a matter of fact they form the connection link between the doctors and the patients which is missing altogether in our health care system.

This document precisely briefs the details of B.Sc program and master programs as prepared by the experts' committee. I am pleased to acknowledge the efforts made by Prof. Dr Abdul sattar and honorable members of Board of Studies. The contribution made by them will go a long way in the education and training in the field of AHS.

I hope this program will meet the latest trends in B.S and Master Programs and will certainly produce competent Para Medical personnel to fill in the gap in the system which is main objective of this program.

Prof. Dr. Fazal Rahim
Vice Chancellor
Bacha Khan University
Charsadda

1st Semester (1st year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT001	Anatomy-I	3	1
2	DT002	Physiology-I	3	1
3	DT003	Pharmacology-I	2	1
4	DT004	Islamic Education	2	0
5	DT005	Biochemistry-I	2	1
6	DT006	Computer Skills-I	1	1
Total =			17	

2nd Semester (1st year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT007	Anatomy-II	3	1
2	DT008	Physiology-II	3	1
3	DT009	Pharmacology-II	2	1
4	DT010	Pak Study	2	0
5	DT011	Biochemistry-II	2	1
6	DT012	Computer-II	1	1
Total =			17	

3rd Semester (2nd year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT013	Specialized Anatomy-I	3	1
2	DT014	Tooth Morphology & Dental Anatomy	3	1
3	DT015	Preventive Dentistry	3	1
4	DT016	Basic Epidemiology	2	0
5	DT017	Sociology-I	2	0
6	DT018	Bio Statics-I	2	0
Total =			18	

4th Semester (2nd year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT019	Specialized Anatomy-II	3	1
2	DT020	Science of Dental Materials	3	1
3	DT021	Oral Pathology and Microbiology	3	1
4	DT022	Basic Epidemiology-II	3	0
5	DT023	Sociology-II	2	0
6	DT024	Biostatics-II	2	0
Total =			18	

5th Semester (3rd year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Theory
1	DT025	Prosthodontics-I	3	1
2	DT026	Operative Dentistry-I	3	1
3	DT027	Community Dentistry	3	1
4	DT028	Periodontology-I	2	1
5	DT029	Pathology-I	2	0
6	DT030	Basic Communication Skills-I	1	0
Total =			18	

6th Semester (3rd year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT031	Prosthodontics-II	3	1
2	DT032	Operative Dentistry-II	3	1
3	DT033	Dental Radiography	3	1
4	DT034	Periodontology-II	2	1
5	DT035	Pathology-II	2	0
6	DT036	Basic Communication Skills-II	1	0
Total =			18	

7th Semester (4th year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT037	Orthodontics-I	2	1
2	DT038	Oral and Maxillofacial Surgery-I	2	1
3	DT039	Instrumental Care and Infection Control	2	1
4	DT040	Public Health	3	0
5	DT041	Research Methodology	2	0
6	DT042	Ethics and Management	2	0
Total =			19	

8th Semester (4th year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT043	Introduction to Clinical Work	2	1
2	DT044	Oral and Maxillofacial Surgery-II	1	2
3	DT045	Orthodontics-II	1	2
4	DT046	Endodontics	2	1
5	DT047	Research Project	0	6
Total =			18	

AIMS AND OBJECTIVE OF THE COURSE

Aims:

The aims of the 4 years program in Bachelor in B.Sc (Hons) Dental Technology is to equipped the student with relevant professional knowledge, skills, techniques and ethical values to enable them to apply their acquired expertise at the level between the doctor and the patient for efficient health services delivery.

OBJECTIVES

B.Sc (Hons) Dental Technology education and training should enable the student to:

- Develop accuracy and meticulousness to attain high levels of ethics and technical proficiency.
- Access the technical and non-technical skills in a standardized and reproducible environment
- Strengthen the decision power and exercise appropriate judgment skills, to be applied especially and during crisis.
- Develop good leadership, problem solving and administrative skills.
- Develop and analyze innovative strategies for effective communication with the patient and the health care personnel.
- Demonstrate inter disciplinary team building strategies or effective co-ordination between various allied health disciplines.
- Demonstrate understanding of the basic concepts of professional behaviors and legal implementations of work environment.
- Demonstrate the knowledge of his/her role in health care delivery system.
- Establish and maintain continuing education as a faction of growth and maintenance of professional competence.

NOMENCLATURE AND DURATION

NOMENCLATURE:

The name of the Degree program shall be B.Sc (Hons) Dental Technology. The duration the course shall be 4 year (8 semesters) with structured training in the recognized department under an approved supervisor.

COURSE TITLE:

B.Sc (Hons) Dental Technology

COURSE DURATION:

Four year, eight semesters structured training in the recognized department under the guideline of an approved supervisor.

CREDIT HOURS

130 Hours

MEDIUM OF INSTRUCTION:

English

METHOD OF INSTRUCTION:

As a policy, active participation of the students will be encouraged. Following teaching modalities will be employed:

- Large group teachings (lectures)
- Small group teachings
- Seminar presentations
- Assignments
- Skills teachings
- Self-study and use of internet

In addition, to promote interactive and communication skills, following methods will be used;

ELIGIBILITY CRITERIA FOR ADMISSION:

F.Sc Pre-Medical, F.Sc Medical Technology or Equivalent HSSC Certificate from IBBC Islamabad with atleast 45% marks.

1st Semester (1st year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT001	Anatomy-I	3	1
2	DT002	Physiology-I	3	1
3	DT003	Pharmacology-I	2	1
4	DT004	Islamic Education	2	0
5	DT005	Biochemistry-I	2	1
6	DT006	Computer Skills-I	1	1
Total =			17	

2nd Semester (1st year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT007	Anatomy-II	3	1
2	DT008	Physiology-II	3	1
3	DT009	Pharmacology-II	2	1
4	DT010	Pak Study	2	0
5	DT011	Biochemistry-II	2	1
6	DT012	Computer-II	1	1
Total =			17	

3rd Semester (2nd year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT013	Specialized Anatomy-I	3	1
2	DT014	Tooth Morphology & Dental Anatomy	3	1
3	DT015	Preventive Dentistry	3	1
4	DT016	Basic Epidemiology	2	0
5	DT017	Sociology-I	2	0
6	DT018	Bio Statics-I	2	0
Total =			18	

4th Semester (2nd year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT019	Specialized Anatomy-II	3	1
2	DT020	Science of Dental Materials	3	1
3	DT021	Oral Pathology and Microbiology	3	1
4	DT022	Basic Epidemiology-II	3	0
5	DT023	Sociology-II	2	0
6	DT024	Biostatistics-II	2	0
Total =			18	

5th Semester (3rd year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Theory
1	DT025	Prosthodontics-I	3	1
2	DT026	Operative Dentistry-I	3	1
3	DT027	Community Dentistry	3	1
4	DT028	Periodontology-I	2	1
5	DT029	Pathology-I	2	0
6	DT030	Basic Communication Skills-I	1	0
Total =			18	

6th Semester (3rd year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT031	Prosthodontics-II	3	1
2	DT032	Operative Dentistry-II	3	1
3	DT033	Dental Radiography	3	1
4	DT034	Periodontology-II	2	1
5	DT035	Pathology-II	2	0
6	DT036	Basic Communication Skills-II	1	0
Total =			18	

7th Semester (4th year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT037	Orthodontics-I	2	1
2	DT038	Oral and Maxillofacial Surgery-I	2	1
3	DT039	Instrumental Care and Infection Control	2	1
4	DT040	Public Health	3	0
5	DT041	Research Methodology	2	0
6	DT042	Ethics and Management	2	0
Total =			19	

8th Semester (4th year)

Papers	Course Code	Subjects	Credit Hrs	
			Theory	Practical
1	DT043	Introduction to Clinical Work	2	1
2	DT044	Oral and Maxillofacial Surgery-II	1	2
3	DT045	Orthodontics-II	1	2
4	DT046	Endodontics	2	1
5	DT047	Research Project	0	6
Total =			18	

1st SEMESTER

PAPER-I: ANATOMY-I (1st SEMESTER)

PAPER: 1

TOTAL MARKS : 100

INTERNAL MARKS 40

EXTERNAL MARKS 60

CREDIT HOURS 3+1

TIME: 3 HRS

OBJECTIVE:

To introduce the students the significance of the subject of anatomy in medical science regarding its knowledge its applications and day-to-day developments in the subject

COURSE CONTENT:

- I. General Anatomy**
 - Anatomical terms and positions
 - Description of tissue
- II. Systemic Anatomy**
 - Systemic Anatomy includes
 - a. Muscular skeletal system
 - b. Gastrointestinal system
 - c. Respiratory system
 - d. Cardiovascular system

RECOMMENDED BOOKS:

Snell's clinical Anatomy (Text Book) by Snell 7thg Edition 2000 published by Churchill Living Stone

Gray's anatomy (Reference Book) by Roger Warwick Petter L. Williams 1973 published by Langman group limited.

Paper -2 Physiology (1st Semester)

PAPER: 2

TOTAL MARKS : 100

CREDIT HOURS 3+1

INTERNAL MARKS 40

EXTERNAL MARKS 60

TIME: 3 HRS

OBJECTIVE:

To introduce the students the significance of the subject of Physiology in medical science regarding its knowledge in making the other subjects of medical sciences understandable. Its applications and day to day developments in the subject of Physiology.

COURSE CONTENT:

1. Cell
2. Gastrointestinalsystem
3. Respiratory system
4. Cardiovascular system
5. Blood and immunity

RECOMMENDED BOOKS:

Snell's clinical Anatomy (Text Book) by Snell 7thg Edition 2000 published by Churchill Living Stone

Gray's anatomy (Reference Book) by Roger Warwick Petter L. Williams 1973 published by Langman group limited.

Paper-3: Pharmacology (1st Semester)

PAPER: 3

TOTAL MARKS : 100

CREDIT HOURS 3+1

INTERNAL MARKS 40

EXTERNAL MARKS 60

TIME: 3 HRS

OBJECTIVE:

To introduce the students the knowledge of the subject of pharmacology with regards to its importance in understanding the other disciplines of medical sciences regarding the application of the subject and to learn about the new developments in the field of pharmacology.

COURSE CONTENT:

1. Introduction to Pharmacology
2. Pharmacokinetics
3. Pharmacodynamics

RECOMMENDED BOOKS:

Lippincott's pharmacology (Text Book) by Mycek 2nd edition 2000 published by Lippincott Raven

Katzung textbook of pharmacology (Reference Book) by Bertram Katzung 8th Edition published by Appleton.

Paper-4: Islamic Education (1st Semester)

PAPER:	4		
TOTAL MARKS : 100			CREDIT HOURS 2
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

OBJECTIVE:

- To educate students regarding basic concept of Islam
- To educate students regarding Islamic influence in the world
- To educate the students regarding Islamic Medical Ethics & Contribution of the Muslims in Medicine, Science & Technologies.

COURSE CONTENT:

Holy Quran and Sunnah

1.1 Holy Quran

- Introduction
- Importance and characteristics
- Sura-e-Hujarat with translation
- Sura-e-Al-Furqan: Verses 63-77 with translation and explanation

1.2 Sunnah

- Importance of Sunnah
- Twenty selected Hadith with translation
(Mention in Islamiyat Compulsory for degree classes,
Published by:
(Allama Iqbal Open University)

Fundamental Doctrine of Islam

- a. Islam with reference to Holy Quran & Hadith
- b. Tawheed (Oneness of Allah)
- c. Prophethood
- d. The day of judgment (Akhirat)
- e. Salat & nimaz (Abadaat)
- f. Saum (Fasting)
- g. Zakat
- h. Hajj
- i. Jihad

Life of Holy Prophet

- 3.1 study of the life of the Holy Prophet & Seerat
- 3.2 life of the Holy Prophet at Maka from birth to Hijra (Migration to Madina)
- 3.3 Method of Preaching & difficulties
- 3.4 Life of Holy Prophet at Madina
- 3.5 Amicable Accords (Mowkhat)
- 3.6 Treaty of Madina (Misaq-e-Mukarama)
- 3.7 Conquest of (Maka Al-Mukarama)
- 3.8 Hajat-ul-wida

The Ethical View of Islam & Characteristics Islamic Cultural

- 4.1 Character Building
- 4.2 The Concept of Ethics
- 4.3 The Moral Values: Truthfulness, Tawakal, Taqwa, Fulfillment of Promises, Simplicity, the steam of Parents and Guardians, Behaviorism Y & Broadness,
- 4.4 Islamic Society: Kisab-e-Halal, Human Dignity, Social Justice Addle-e- Shoora

Influence of the Islamic Civilization

- 4.4 Panacea of our Problems
Our Future, Unity, Political Stability

Islamic Medical Ethics

Contribution of the Muslims in Medicine, Science and Technology

NOTE: While keeping the Islamic values and basic Characteristics of Islamic Society the Proper guideline may be provided in such a way that should be applicable in business and trade.

RECOMMENDED BOOKS:

Islamiyat Compulsory, Islamabad, Allama Iqbal Open University, Islamabad
M.D Zaffar, Islamic Education (Compulsory) Lahore Aziz Book Dept. Urdu Bazaar.

Paper – 5 : Biochemistry (1st Semester)

PAPER:	5		
TOTAL MARKS : 100			CREDIT HOURS
INTERNAL MARKS	40	EXTERNAL MARKS	60
			TIME: 3 HRS

OBJECTIVE:

The introduction of knowledge subject of biochemistry to student regarding its importance in understanding the other domains of medical science and regarding the applications of the subject and to know about the recent developments in the field of biochemistry.

COURSE CONTENT:

1. Introduction
2. Carbohydrate
3. Proteins
4. Lipids
5. Enzyme
6. Vitamins

RECOMMENDED BOOKS:

Harper's text book of Biochemistry (Text Book) by Bertram Katzung 1992 published by Appleton Lange.

Biochemistry for Paramedics by Dr. Khalid Mehmood 2005 published by UB agency Peshawar.

Paper-6: Computer Skills (1st Semester)**PAPER: 6****TOTAL MARKS : 100****CREDIT HOURS 1+1****INTERNAL MARKS 40****EXTERNAL MARKS 60****TIME: 3 HRS****OBJECTIVE:**

To introduce the students the significance of the subject of computer definitions, history, types and component, hardware and software application.

COURSE CONTENT:**Introduction:**

1. Definition of computer
2. History of computer
3. Classification of computer
4. Components of computer

Hardware and Software

1. Physical components of computer
2. Logical component of computer
3. System software
4. Application software

Storage devices

1. Magnetic storage devices
2. Optical storage devices
3. Memories

RECOMMENDED BOOKS:

Fundamental of I.T concept by Nayyar Kanwal by CECOSE University Teacher's notes

2ND SEMESTER**Paper-1: Anatomy – II (2nd Semester)****PAPER: 1****TOTAL MARKS : 100****CREDIT HOURS 3+1****INTERNAL MARKS 40****EXTERNAL MARKS 60****TIME: 3 HRS****COURSE CONTENT:**

- a. Lymphatic system
- b. Head and Neck
- c. Nervous System
- d. Urinary System
- e. Reproductive System
- f. Endocrine System
- g. Special Senses

RECOMMENDED BOOKS:

Snell's clinical Anatomy (Text Book) by Snell 7thg Edition 2000 published by Churchill Living Stone

Gray's anatomy (Reference Book) by Roger Warwick Petter L. Williams 1973 published by Langman group limited.

Paper-2: Physiology – II (2nd Semester)

PAPER: 2
TOTAL MARKS : 100
INTERNAL MARKS 40 **EXTERNAL MARKS 60** **CREDIT HOURS 3+1**
TIME: 3 HRS

COURSE CONTENT:

1. Nerves System
2. Urinary System
3. Endocrine System
4. Special Senses

RECOMMENDED BOOKS:

Guyton test book of Physiology (Text Book) by Guyton 1991 published by W.B Saunders company

Ganong review of Physiology (Reference Book) by Ganong 20th Edition 2000 published by Land Medical boo

Paper-3: Pharmacology – II (2nd Semester)

PAPER:	3		
TOTAL MARKS : 100			CREDIT HOURS 2+1
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

OBJECTIVE:

To introduce the students the knowledge of the subject of pharmacology with regards to its importance in understanding the other disciplines of medical sciences regarding the application of the subject and to learn about the new developments in the field of pharmacology.

COURSE CONTENT:

1. Adverse effects of drugs
2. Classification of drugs

RECOMMENDED BOOKS:

Lippincott's pharmacology (Text Book) by Mycek 2nd edition 2000 published by Lippincott Raven

Katzung textbook of pharmacology (Reference Book) by Bertram Katzung 8th Edition published by Appleton.

Paper-4: Pak Study (2nd Semester)

PAPER:	4		CREDIT HOURS 2
TOTAL MARKS : 100			
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

OBJECTIVE:

To introduce to the student the significant of Pak Study B.Sc level course

COURSE CONTENT:

- I. **Chapter One**
Ideology of Pakistan
- II. **Chapter Two**
Background of ideology of Pakistan
 - a. Reformation movement
 - b. Educational movement
 - c. Political movement
- III. **Chapter Three**
Movement of Pakistan (Since Allama Iqbal Address at Ala Bad 1930 till 4th August 1947)
- IV. **Chapter Four**
Establishment of Pakistan (Political, Social Financial Problems)
- V. **Chapter Five**
Constitutional and Political Developments in Pakistan
- VI. **Chapter Five**
Geographical condition of Pakistan
- VII. **Chapter Seven**
Pakistan and Muslim world

RECOMMENDED BOOKS:

Pakistan Studies Compulsory for Degree Courses by Dr. Noshaad Khan

Paper-5: Biochemistry – II (2nd Semester)**PAPER: 5****TOTAL MARKS : 100****CREDIT HOURS 2+1****INTERNAL MARKS 40****EXTERNAL MARKS 60****TIME: 3 HRS****OBJECTIVE:**

The introduction of knowledge subject of biochemistry to student regarding its importance in understanding the other domains of medical science and regarding the applications of the subject and to know about the recent developments in the field of biochemistry.

COURSE CONTENT:

1. Nutrition food and dietetics
2. Metabolism
3. Body fluids
4. Acid base balance
5. Minerals

RECOMMENDED BOOKS:

Harper's text book of Biochemistry (Text Book) by Bertram Katzung 1992 published by Appleton Lange.

Biochemistry for Paramedics by Dr. Khalid Mehmood 2005 published by UB agency Peshawar.

Paper-6: Computer Skills– II (2nd Semester)**PAPER: 6****TOTAL MARKS : 100****CREDIT HOURS 1+1****INTERNAL MARKS 40****EXTERNAL MARKS 60****TIME: 3 HRS****OBJECTIVE:**

To introduce the students the significance of the subject of computer definitions, history, types and component, hardware and software application.

COURSE CONTENT:**Application software**

Microsoft word

Microsoft power point

Microsoft excel

Microsoft Definition of computer

Hardware and Software

5. System software

6. Application software

**RECOMMENDED BOOKS: Fundamental of I.T concept by Nayyar Kanwal by CECOSE University
Teacher's notes**

3RD SEMESTER**PAPER-I: SPECIALIZED ANATOMY-I (3rd SEMESTER)****PAPER: 1****TOTAL MARKS : 100****CREDIT HOURS 3+1****INTERNAL MARKS 40****EXTERNAL MARKS 60****TIME: 3 HRS****THEORY CONTENT:-**

- Scalp, Temple, Face
- Anterior & Posterior Triangle of Neck
- Content of Vertebral Canal
- Orbit
- Parotid, Submandibular, Sublingual Gland
- Temporal, Infratemporal Region

PRACTICAL WORK

- No Practical Work
- Viva Only

Recommended Books

- Clinical Anatomy by Shell 7th edition 2000 by Churchill living stone

PAPER-2: TOOTH MORPOLOGY & DENTAL ANATOMY**PAPER: 2****TOTAL MARKS : 100****CREDIT HOURS 3+1****INTERNAL MARKS 40****EXTERNAL MARKS 60****TIME: 3 HRS****THEORY CONTENT:-**

- Form and arrangement of teeth
- Dental Arches
- Tooth Sockets
- Occlusion
- Age changes in teeth and Jaw
- Periodontium
- Development of upper & lower jaw
- Tooth Development tooth eruption
- Establishment of deciduous & permanent dentition
- Shedding of deciduous teeth
- Tooth movement & associate changes
- Basic structure of dental tissues
- Cementum
- Pulp
- Enamel
- Dentine alveolar process
- Alveolar process
- General characteristics of Maxillary & Mandibular teeth
- Height of contom
- Contact Areas
- Root characteristics
- Eruption of primary & Secondary teeth
- Permanent incisors
- Permanent canine
- Permanent Molars
- Classification & eruption of permanent teeth
- Arch Classification

PRACTICAL WORK

- No Practical Work
- Viva Only

Recommended Books

- Essentials of Anatomy & Physiology By Seely, Stephens & Tate
- General Anatomy by Laeeq Hussain
- Anatomy & Physiology by Ross & Wilson
- General Anatomy by Dr. Ghulam Ahmad
- Color Atlas of Anatomy by MC Minn

PAPER-3: PREVENTATIVE DENTISTRY**PAPER: 3****TOTAL MARKS : 100****INTERNAL MARKS 40****EXTERNAL MARKS 60****CREDIT HOURS 3+1****TIME: 3 HRS****THEORY CONTENT:-**

- Prevention of Dental Caries
- Gingivitis
- Dental Plaque
- Oral Hygiene
- Dental Caries Control Prevention
- Dental Health education

PRACTICAL WORK

- No Practical Work
- Viva Only

Recommended Books

- Wikins EM Clinical Practice of Dental Hygienist
- Clinical Dental Hygiene CV Mosby Co

Paper-4: Basic Epidemiology – I (3rd Semester)

PAPER:	4		
TOTAL MARKS : 100			CREDIT HOURS 2
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

COURSE OBJECTIVE:

To introduce to the students the know-how of the subject of epidemiology in order to apply the knowledge of the subject regarding the community and community related disease.

COURSE CONTENTS:

1. Introduction to epidemiology
2. Determinants
 - Primary
 - Secondary
3. Clinical Epidemiology

Recommended Books

Public Health by Illyas Ansari

Public Health by J Park

Paper-5: Sociology– I (3rd Semester)

PAPER:	5		
TOTAL MARKS : 100			CREDIT HOURS 2
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

COURSE OBJECTIVE:

To produce to the students the significance of definition and scope of sociology as a science, their relation with other sciences.

COURSE CONTENTS:

1. **General**
Definition and scope of sociology, sociology is a science, Islamic Sociology
2. **Medical Sociology**
Introduction contribution of sociology to medicine
3. **Health and Disease**
Social definition of illness, social and emotional component of illness
4. **Patient and paramedic**
Paramedics view of disease and patient, psychology of patient/paramedic relationship
5. **Mental illness sociological perspective**
Definitions, social implication of mental illness
6. **Rehabilitation**
Definition, physical, mental handicap
Method in rehabilitation: Guidance counseling and vocational training

Recommended Books

Medical sociology by William C Cuckerham in 1978 printed by USA Health education by Larna Robinson Wesley F Alles in 1994 by Times Mirror/Mosby College Publishing ST Liois Turonto

Reference Book:

Social psychology of health by Shirlynn Spacapan Stuart Oskanp Edition by SAGE publication New Delhi, New York, in 1987

Paper-6: Biostatistics– I (3rd Semester)

PAPER:	6		
TOTAL MARKS : 100			CREDIT HOURS 2
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

COURSE OBJECTIVE:

To introduce to the students the significance of bio-statistics their topic in univariate statistics means basic concept, describing and exploring data, normal distribution, sampling distribution and hypothesis testing, basic concept of probability and categorical data CH and application of statistics and social research.

COURSE CONTENTS:

Topics in univariate statistics

A. Basic

1. Introduction
2. Important terms
3. Senses
4. Method uses for taking senses, information collection during senses, method of estimating the population of any year
5. Measurement scale

B. Describing and Exploring Data

1. Measures of central tendency and variability
2. Health Statistics (Preparation, ration, rate)
3. Percentiles, quartiles and deciles

RECOMMENDED BOOKS

Statistical methods for psychology by Howell DC in 1992 publisher by Belmont CA Duxby press USA

A guide to research methodology, biostatistics and medical writing by college of physicians and surgeons Pakistan by WHO collaboration center

Reading understanding multivanant statistics giimm LG Yard AD PR, in 1995 publisher American Psychological association

Ilyas Ansari's community medicine (Text Book) by Ilyas and Ansari 2003 published by Medical division Urdu Bazaar Karachi.

4th SEMESTER**PAPER-I: SPECIALIZED ANATOMY-II (4th SEMESTER)****PAPER: 1****TOTAL MARKS: 100****INTERNAL MARKS 40****EXTERNAL MARKS 60****CREDIT HOURS 3+1****TIME: 3 HRS****THEORY CONTENT:-**

- Deep Structures of Neck
- Mouth & Pharynx
- Nose & Para Nasal Sinuses
- Larynx
- Tongue
- Ear
- Eyeball

PRACTICAL WORK

- No Practical Work
- Viva Only

Recommended Books

- Clinical Anatomy by Shell 7th edition 2000 by Churchill living stone

Paper-2: Science of Dental Material (4th Semester)**PAPER: 2****TOTAL MARKS: 100****INTERNAL MARKS 40****EXTERNAL MARKS 60****CREDIT HOURS 3+1****TIME: 3 HRS****THEORY CONTENT:-****Chemistry of Dental Materials****Impression of Materials**

- Classification of Impression Materials
- Rigid
- Plaster of Paris
- Plastic

Impression Compound

- Low Fusing
- High Fusing

Zinc Oxide Eugenol Paste**Elastic Hydrocolloid**

- Irreversible
- Reversible

Elastomers**Silicon**

- Addition Silicon
- Condensation Silicon

Gypsum Products

- Varieties of Gypsum
- Classification
- Uses
- Setting
- Setting reaction
- Setting time
- Accelerators
- Retarders

Natural Resins

- Classification
- Thermoplastic
- Thermo hardening

Synthetic Resins

- Synthetic resins used in dentistry
- Restorative resins
- Chemistry of synthetic resin
- Monomer, polymer
- Types of polymerization
- Parts of denture
- Teeth

Acrylic resin

Porcelain teeth

Cold mould seal**Dental waxes**

- Definition, classification, properties
- Inlay wax composition, uses manipulation, properties
- Inlay wax composition, uses manipulation, properties
- Casting wax composition, uses manipulation, properties
- Base plate composition, uses manipulation, properties
- Utility wax composition, uses manipulation, properties
- Impression wax composition, uses manipulation, properties
- Bite regulation wax composition, uses manipulation, properties

Dental Investment

- Material for metal casting
- Classification of dental investment
- Ideal properties of dental investment

Gypsum bonded investment

- Composition
- Properties

Phosphate bonded Investment

- Composition
- Uses

Silica bonded investment

- Composition
- Setting reaction
- Thermal expansion

Casting

- Instruments used for metal casting
- Steps in metal casting

- Procedure
- Uses

Ceramics

- Nature of dental ceramics
- Composition
- Feldspar porcelain
- Manufacturing
- Composition
- Classification of dental porcelain in detail
- Metal ceramics
- Composition
- Uses

Wrought base metal alloys

Base metal alloys

Wrought alloys

- Iron
- Ferrite
- Austenite
- Eutectic
- Eutectoid alloy
- Cementite
- Pearlite
- Chromium
- Pig iron

Wrought iron

- Uses
- Composition

Swaging

Soldering and welding

- Classification of solder
- Uses of soldering
- Soldering procedure
- Types
- Composition
- Properties

Welding

- Methods of welding
- Uses
- Composition

Finishing and polishing material

- Abrasives and polishers
Objective of finishing and polishing
Properties of abrasives
Classification of abrasives
- Polishers
Composition
Uses
- **Dentifrices**
Uses
Classification

Tooth Cutting Materials

- Hand cutting instrument
- Dental bur
- Parts of bur
- Shapes of bur

Dental materials**Dental implants**

- Definition
- Types
- Application
- Materials for making dental implants

Dental Amalgam

- History
- Classification + Composition of Silver Amalgam
- Manufacturing of Amalgam alloys
- Setting of low copper alloys mercury + alloy ratio
- Triturating
- Amalgamation
- Carving burnishing polishing hazards Mercury

Direct filling gold (cohesive gold)

- Merits and demerits of gold
- Classification of gold
- Manipulation of direct filling gold
- Compaction

Dental cements

- Definition
- Ideal properties
- Classification

Zinc oxide Eugenol cement

- Composition
- Uses
- Classification
- Setting

Zinc phosphate cement

- Composition
- Uses classification
- Setting

Silicate cement

- Composition
- Setting
- Properties
- Uses

Zinc silicophosphate cement

- Composition
- Uses
- Properties

Glass monomer cement

- Classification
- Uses
- Properties
- Setting

Zinc polycarboxylate cement

- Classification
- Uses
- Properties
- Setting

Calcium hydroxide cement

- Classification
- Uses
- Properties
- Setting

Dental casting alloys

- Alloy classification
- Alloy classification based on color of alloy, properties
- Heat treatment of high noble + noble metals
- Alloys for metal ceramic restoration
- Base metal alloys
- Properties of chrome
- Cobalt alloys
- Metallic denture base materials

Practical**Dental Chemistry**

- Wire bending techniques
- Identification of all materials
- Manipulation of dental plasters

Recommended Books

- Notes on dental sciences by Shahena Nusrat
- Dental chemistry by Cunningham
- Notes on Dental Materials by E.C. Combe
- Philips science of dental materials

Paper – 3: Oral Pathology & Microbiology (4th Semester)**PAPER: 3****TOTAL MARKS: 100****CREDIT HOURS 3+1****INTERNAL MARKS 40****EXTERNAL MARKS 60****TIME: 3 HRS****THEORY CONTENT:-****Disorder of development of teeth**

- Dental caries
- Pulp disorders
- Jaw cyst, oral soft tissue cysts
- Disorder of Periodontium
- Infection of oral mucosa
- Diseases of salivary glands
- Diseases of TMJ
- Oral ulceration
- Bone disorders
- Structure of bacteria
- Culture media
- Hospital infections
- Disinfection, sterilization
- Common bacteria and their pathogen city
- Structure and properties of fungi
- Structure and properties of viruses
- Structure and properties of parasites
- Structure and properties of protozoa

PRACTICAL WORK

- No Practical Work
- Viva Only

Paper – 4 : Basic Epidemiology – II (4th Semester)

PAPER:	4		
TOTAL MARKS : 100			CREDIT HOURS 3
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

COURSE OBJECTIVE:

To introduce to the students the know-how of the subject of epidemiology in order to apply the knowledge of the subject regarding the community and community related disease.

COURSE CONTENTS:

1. Occupational epidemiology
2. Importance of epidemiology
3. Definitions of common term related to epidemiology
4. Health indication

Recommended Books

Public Health by Ilyas Ansari

Public Health by J Park

Paper – 5 : Sociology – II (4th Semester)

PAPER:	5		
TOTAL MARKS : 100			CREDIT HOURS 2
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

COURSE OBJECTIVE:

To produce to the students the significance of definition and scope of sociology as a science, their relation with other sciences.

COURSE CONTENTS:

1. **Social disorganization**
The concept and factor of social organization, family, group and community disorganization
2. **Problem of community**
Problem of crime, method of treatment and preventative measure
3. **Education Problems**
Deterioration of education standard in school, college and university
4. **Health Problems**
Illness behavior, delivery and utilization of health services
5. **Introduction to applied sociology**
Definition of applied sociology, nature and causative analysis of social problem and the role of sociologist in solving social problems
6. **Application of social research in social problems**
Social servu and social research, nature purpose and function

Recommended Books

Medical sociology by William C Cuckerham in 1978 printed by USA Health education by Laurna Robinson Wesley F Alles in 1994 by Times Mirror/Mosby College Publishing ST Liois Turonto

Reference Book:

Social psychology of health by Shirlynn Spacapan Stuart Oskanp Edition by SAGE publication New Delhi, New York, in 1987

Paper – 6: Biostatistics – II (4th Semester)

PAPER:	6		
TOTAL MARKS : 100			CREDIT HOURS 2
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

COURSE OBJECTIVE:

To introduce to the students the significance of bio-statistics their topic in univariate statistics means basic concept, describing and exploring data, normal distribution, sampling distribution and hypothesis testing, basic concept of probability and categorical data CH and application of statistics and social research.

COURSE CONTENTS:

Topics in univariate statistics

- A. Sampling distribution and hypothesis testing
- B. Basic concepts of probability
- C. Data collection (purpose and technique)
- D. Categorical data and numerical data
 - Application of statistics in social research
 - Percentages, measure of central tendencies
- A. Means, Median and Mode
- B. Quartile, decile and percentile

RECOMMENDED BOOKS

Statistical methods for psychology by Howell DC in 1992 publisher by Belmont CA Duxby press USA

A guide to research methodology, biostatistics and medical writing by college of physicians and surgeons Pakistan by WHO collaboration center

Reading understanding multivariate statistics gimm LG Yard AD PR, in 1995 publisher American Psychological association

Ilyas Ansari's community medicine (Text Book) by Ilyas and Ansari 2003 published by Medical division Urdu Bazaar Karachi.

5th SEMESTER**Paper – 1: PROSTHODONTICS – I (5th Semester)****PAPER: 1****TOTAL MARKS: 100****INTERNAL MARKS 40****EXTERNAL MARKS 60****CREDIT HOURS 3+1****TIME: 3 HRS****THEORY CONTENT:-****Partial Denture**

- Classification of partial dentures
- Components parts of partial denture
- Materials for partial denture bases
- Basic principles of partial denture design
- Surveying
- Investing
- Casting
- Finishing & polishing of metal frame work
- Impressions of the partially edentulous mouth
- Recording occlusion in the partially edentulous cases
- Selection of Teeth
- Laboratory procedures
- Management of manufacturing defects
- Immediate dentures
- Onlay dentures
- The cleft palate

PRACTICAL WORK

- Parts of partial dentures
- Surveying
- Designing
- Construction of wax pattern, sprucing, investing, casting, finishing and polishing of Metal Frame Work.
- Brief description of articulators and articulation
- Selection of teeth, setup, flasking, processing, finishing & polishing acrylic part of partial denture
- Pouring impressions with model materials
- Carving out wax patterns in modeling wax, inlay wax, sheet casting wax

- Flasking, dewaxing and processing procedures
- Finishing and polishing techniques
- Post Insertion complaints and follow up

Recommended Books

- Boucher's
- Fenn's Clinical Dental Prosthetics
- A Color Guide to removable partial denture design davenport JC, Basker
- PM, Heath JR, Ralph JP & Glantz
- Removable denture construction, bates JF, Huggett R Stafford GD
- Over dentures in general dental Practice, basker RM, Harrison A, Ralph JP & Watson C

Paper – 2: Operative Dentistry – I (5th Semester)

PAPER: 2

TOTAL MARKS : 100

INTERNAL MARKS 40

EXTERNAL MARKS 60

CREDIT HOURS 3+1

TIME: 3 HRS

THEORY CONTENT:-

- Cutting Instruments and mechanical and biological consideration
- The control of moisture
- Impression materials and techniques
- Detailed study of lab procedures:
 - a) Dye formation (plaster dye, amalgam, silicon phosphate dye, electroplated dye)

PRACTICAL WORK

- Elementary knowledge of cavity design
- Detailed study of laboratory procedure
- Dies formation. (Plaster dye, amalgam/silicon phosphate dyes, electroplated dyes)
- Wax pattern

Recommended Books

- Operative dentistry by M.A. Marzouk
- Art and Science of operative dentistry by Sturtevant
- Inlays Crown and Bridges by Colin R Cowel
- Introduction to metal Ceramic Technology by W. Patrick Naylor
- A Color Atlas of Clinical Operative Dentistry, Crowns and Bridges 2nd edition Grundy and Glyn Jones Boucher's
- Resin Bonded Bridges Tay W-M

Paper – 3: Community Dentistry – I (5th Semester)**PAPER: 3****TOTAL MARKS : 100****INTERNAL MARKS 40****EXTERNAL MARKS 60****CREDIT HOURS 3+1****TIME: 3 HRS****THEORY CONTENT:-**

- Oral hygiene
- Community Dentistry
- Dental Education
- Dental floss
- Dental awareness in class education
- Community mobilization on dental health
- Benefits of good oral hygiene
- Relation of oral hygiene to other medical disorder

PRACTICAL WORK

- No Practical
- Viva only
- **Recommended Books**
- Wilkins EM: Clinical Practice of Dental Hygienist
- Clinical Dental Hygiene CV Mosbay Co.

Paper – 1: PERIODONTOLOGY– I (5th Semester)**PAPER: 4****TOTAL MARKS: 100****INTERNAL MARKS 40****EXTERNAL MARKS 60****CREDIT HOURS 2+1****TIME: 3 HRS****THEORY CONTENT:-**

- Periodontium and its characteristics
- Periodontal diseases
- Gingivitis
- Gingival enlargement
- Periodontitis

PRACTICAL WORK

- No practical work – only Viva

Recommended Books

- A text book of Clinical Periodontology by Jan Lindhe
- Essentials of Periodontology by Elizabeth
- Community oral health by Cynthia M. Pine
- Preventive Dentistry by John O. Forrest

Paper – 5: PATHOLOGY – I (5th Semester)

PAPER:	5		
TOTAL MARKS : 100			CREDIT HOURS 2
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

COURSE OBJECTIVE:-

To introduce to the students the knowledge of the subject of Pathology regarding its needs in understanding the different domains of medical sciences and regarding the other applications of the subject and to come to know the recent advancements in the field of pathology.

COURSE CONTENT:

1. Introduction to Pathology
2. Cell Injury
3. Inflammation
4. Repair

Recommended Books

- Robin's textbook of Pathology (Text Book) by Robin Cottran Kumar 6th Edition 1998, Published by I.E. Saunders.
- Pathology illustrated (Reference Book) by AD. T Gocan 1991 published by Churchill Livingstone.

Paper – 6: BASIC COMMUNICATION SKILLS – I (5th Semester)

PAPER:	6			
TOTAL MARKS : 100				CREDIT HOURS 1
INTERNAL MARKS	40		EXTERNAL MARKS 60	TIME: 3 HRS

COURSE OBJECTIVE:-

To introduce to the students about the basic communication skill

COURSE CONTENT:

1. Definition of communication
2. Communication module
3. 7C, s of Communication
4. Social marketing
5. Mode of communication

Recommended Books

- Effective Business Communication
- Module or Ensure Public Participation by Dr. Muhammad Ilyas

6th SEMESTER
Paper – 1: PROSTHODONTICS – II (6th Semester)

PAPER:	1		
TOTAL MARKS : 100			CREDIT HOURS 3+1
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

THEORY CONTENT:-

- Biomechanics of edentulous state
- Tissue response to complete tray from primary impression
- Construction Classification of partial dentures
- Construction of secondary denture base from secondary impression
- Formation of Occulusal wax rims
- Articulators and articulation
- Biological consideration in jaw relation and jaw movements
- Biological consideration in vertical jaw relation
- Recording and transferring bases and occlusion rims
- Relating the patient to articulator
- Selection of artificial teeth for edentulous patient
- Setup of teeth
- Completion of Try-In
- Laboratory Procedures
- Tooth supported complete denture
- Management of manufacturing defects
- Repair of denture
- Precision attachments
- Implant logy

PRACTICAL WORK

- Construction of Special tray from primary impression
- Construction of permanent denture base from secondary
- Materials from primary and secondary impression
- Formation of Occulusal wax rims
- Articulators and articulation
- Selection of teeth
- Setup of teeth

- Flasking, dewaxing & processing
- Finishing and Polishing
- Relining & Rebasing
- Immediate dentures
- Precision attachments
- Introduction to implants
- Lab techniques for implants
- Prosthetic rehabilitation
- Post insertion complaints and follow up

EXERCISE:

- Construction of cast metal partial denture
- Complete dentures
- Over – dentures
- Immediate dentures
- Prosthesis for dental implants
- Laboratory techniques for dental implant

Recommended Books

- Boucher's
- Fenn's Clinical Dental Prosthetics
- A Color Guide to removable partial denture design davenport JC, Basker RM, Heath JR, Ralph JP & Glantz
- Removable denture construction, bates JF, Huggett R Stafford GD
- Over dentures in general dental Practice, basker RM, Harrison A, Ralph JP & Watson C

Paper – 2: OPERATIVE DENTISTRY – II (6th Semester)

PAPER:	2		
TOTAL MARKS: 100			CREDIT HOURS 3+1
INTERNAL MARKS	40	EXTERNAL MARKS	60
			TIME: 3 HRS

THEORY CONTENT:-

Elementary Knowledge of cavity design for:

- a) Inlays (class II, M. O. D, class V)
- b) On lays
 - Principals of bridge design
 - Wax patterns of:
 - a) Inlays (class I, class V, ceramic inlays)
 - b) Onlay
 - c) Full veneer crown
 - d) Jacket crown
 - e) Post retained crowns
 - f) Porcelain (Clinical procedure for jacket crown & bridge)
 - Resin bounded bridges
 - Types of crowns and bridges, terminology
 - Pontic designs
 - Causes of bridge failures
 - Porcelain fused to metal
 - Post and core crowns
 - Full crowns
 - **PRACTICAL WORK**
 - Inlays (class II, MOD, class V)
 - On lays and lab preparation
 - Bridge design (Cantilever, fixed) and lab preparation
 - Inlays (class I, Class V, ceramic Inlays) and lab preparation
 - Full veneer crown and lab preparation
 - Jacket crown
 - Partial veneer crown
 - Post retained crowns
 - Porcelain (construction of jacket crown & bridge)

Recommended Books

Same as paper - 1

PAPER: 3

TOTAL MARKS: 100

INTERNAL MARKS 40

EXTERNAL MARKS 60

CREDIT HOURS 3+1

TIME: 3 HRS

THEORIES CONTENTS

- (A) Introduction to Radiology and Dental Radiography
- (B) Indications of Radiograph in Dentistry
- (C) Full Mouth Series(FMX)
- (D) Bitewing X-ray
- (E) Periapical X-ray
- (F) OPG
- (G) Occlusal view
- (H) Ceph X-rays
- (I) Hazards of X-rays
- (J) Precautionary measures for the Operator and Patient
- (K) Causes of failure of X-ray

PRACTICLE WORK:

- . Principles of Radiographic techniques
- . Taking, processing, and interpreting of X-ray

Recommended Books

1. Arc White's

Paper – 4: PERIODONTOLOGY – II (6th Semester)**PAPER: 4****TOTAL MARKS: 100****CREDIT HOURS 2+1****INTERNAL MARKS 40****EXTERNAL MARKS 60****TIME: 3 HRS****THEORY CONTENT:-**

- Periodontium Occulusal trauma
- Gingival recession
- Pericoronitis
- Gingival abscess
- Basic instrument of scaling and root planning

PRACTICAL WORK

- No practical work – only Viva

Recommended Books

- A text book of Clinical Periodontology by Jan Lindhe
- Essentials of Periodontology by Elizabeth
- Community oral health by Cynthia M. Pine
- Preventive Dentistry by John O. Forrest

Paper – 5: PATHOLOGY – II (6th Semester)

PAPER:	5		
TOTAL MARKS : 100			CREDIT HOURS 2
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

COURSE OBJECTIVE:-

To introduce to the students the knowledge of the subject of Pathology regarding its needs in understanding the different domains of medical sciences and regarding the other applications of the subject and to come to know the recent advancements in the field of pathology.

COURSE CONTENT:

1. Hemodynamic Disorders
2. Disorders of Immunity
3. Neoplasia
4. Microbiology

Recommended Books

- Robin's textbook of Pathology (Text Book) by Robin Cottrane Kumar 6th Edition 1998,
- Published by I.E. Saunders.
- Pathology illustrated (Reference Book) by AD. T Gocan 1991 published by Churchill Livingstone.

Paper – 6: BASIC COMMUNICATION SKILLS – II (6th Semester)

PAPER:	6		
TOTAL MARKS : 100			CREDIT HOURS 1
INTERNAL MARKS	40	EXTERNAL MARKS	60
			TIME: 3 HRS

COURSE OBJECTIVE:

To introduce the student about the basic communication skill

COURSE CONTENTS:

1. Media & communication & Counseling
2. Health Education & Motivation
3. Participation involvement
4. Obstacle communication
5. Interpersonal communication & counseling

Recommended Books

- Effective Business Communication
- Module or Ensure Public Participation by Dr. Muhammad Ilyas

7TH SEMESTER**Paper – 1: ORAL MAXILLO-FAXIAL SURGERY (7th Semester)****PAPER: 1****TOTAL MARKS: 100****INTERNAL MARKS 40****EXTERNAL MARKS 60****CREDIT HOURS 2+1****TIME: 3 HRS****THEORY CONTENTS:**

- (A) Introduction to Oral and Maxillofacial surgery
- (B) Principles of Oral Surgery
- (C) How to take a complete Dental History?
- (D) Prevention and Management of Dental Emergencies
- (E) Pharmacological Management of Pain and Anxiety
- (F) Infection Control in Surgical practice
- (G) Instruments used in Oral Surgery

PRACTICAL WORK:

- a) Identification of surgical instruments
- b) Techniques and Use of Surgical instruments
- c) Sterilization and Disinfection

Recommended books:

- A) Contemporary of Oral and Maxillofacial Surgery
- B) Oral and Maxillofacial Surgery by Kurger

Paper – 2: ORTHODONTICS – I (7th Semester)

PAPER: 2

TOTAL MARKS: 100

INTERNAL MARKS 40

EXTERNAL MARKS 60

CREDIT HOURS 2+1

TIME: 3 HRS

THEORY CONTENT:-

Growth of maxilla and mandible

Development of definition and occlusion

Malocclusion

- Etiology
- Classification

Para functional habits

Abnormal bites

- Deep bite
- Open bite
- Cross bite

TMJ

- Anatomy
- Physiology
- Pathology

Instruments used for orthodontics lab work

- Pliers
 - Round
 - Adam
 - Flat
 - Three Prong

Removable appliances

- Parts of removable appliance
- Fabrication of Adam's clasp
 - Labial bow
 - Single Cantilever
 - Palatal finger spring
 - Buccal Canine retractor
 - Robert's Retractor's
 - Quad helix
 - T-Spring
 - Coffin spring

- Bite plane construction
 - Anterior bite plane
 - Posterior bite plane
- Wax up and boxing technique
- Flasking, De-waxing, and processing methods

Myofunctional Appliances

- Types of Myofunctional appliances
- Fabrication of
 - Oral Screen
 - Bionator
 - Anderson's appliance
 - Activator
 - Frankel appliance
 - Inclined plane
 - Night Guards
 - Orthopedic appliances
 - Various orthopedic appliances
 - Rigid device for petit headgear

- Wire Cutters

Wires

- Material
 - Stainless steel
 - Nickel titanium
 - TMA
- Gauges
- Shapes
 - Round Rectangular
 - Co axial
- Wire bending techniques

- **Radiographs**

- Introduction to OPG
 - Lateral Ceph
 - Periapical x-ray
 - Occulusal x-ray
 - Bite-wing
 - Appliance for T.m.J dysfunction P

Practical Orthodontics

- Lab procedures for different removable procedures
- Instruments used in orthodontics
- Wire bending techniques
- Wire work for Adams clasp, labial bow, single cantilever spring, double cantilever spring, Buccal canine retractor, Quad helix, spring, Coffin spring etc
- Wax up and boxing techniques (different springs, expansion screws, Anterior and posterior bite planes).
- Flasking, dewaxing and processing methods of different removable appliances

- Myofunctional appliance
- Oral Screen (articulation, wax up, flasking, processing, finishing and polishing)
- Anderson's appliance (articulation, wax up, flasking, processing, finishing and polishing)
- Bionator (articulation, wax up, flasking, processing, finishing and polishing)
- Frankel appliance (articulation, wax up, flasking, processing, finishing and polishing)
- Inclined plane (articulation, wax up, flasking, processing, finishing and polishing)
- Night guard (articulation, wax up, flasking, processing, finishing and polishing)

RECOMMENDED BOOKS:

- J Peterson, Tucker, Edward Ellis. Contemporary Oral & Maxillofacial surgery
- Oral and Maxillofacial surgery by Kruger

Paper – 3: INSTRUMENTAL CARE (7th Semester)**PAPER: 3****TOTAL MARKS : 100****CREDIT HOURS 2+1****INTERNAL MARKS 40****EXTERNAL MARKS 60****TIME: 3 HRS****THEORY CONTENT:-**

- Hand piece and care
- Sharpening of instruments and care
- Care of dental chair units, evacuator air, compressor, ultrasonic scalar sterilizer, endodontic kit (function, operation, maintenance, common hazards)
- Auto claving, deification of various dental instruments, examination instrument endodontic instruments, oral surgery instruments, ultrasonic scalar, dental material, dressing material.
- Patient requiring special alteration(Physical and mentally handicapped patients)

Recommended Books

- Wikins EM, Clinical Practice of Dental Hygiene

Paper – 4: Public Health (7th Semester)

PAPER:	4		
TOTAL MARKS : 100			CREDIT HOURS 3
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

COURSE OBJECTIVE:

To introduce to the student the significance of the discipline of public health in medical and applied social sciences regarding its history applications and development.

THEORY CONTENTS:

- (A) Introduction to Public Health (B)
Primary Health Care
- (C) Nutrition (D)
Dental Public Health
- (E) Health Education
- (F) Health system Research
- (G) Health Management information system

Recommended Books:

1. Ilyas Angara's Community medicine
2. K Park's community medicine (Reference Book) by K Park 2003 Published by Banarside Bhanot Jaipur India.

Paper – 5: RESEARCH METHODOLOGY (7th Semester)

PAPER:	5		CREDIT HOURS 2
TOTAL MARKS : 100			TIME: 3 HRS
INTERNAL MARKS	40	EXTERNAL MARKS 60	

COURSE OBJECTIVE: _____ Introduction
the students a significance of research methodology to the students foundation concepts of measurements, design clinical research and health system research.

THEORY CONTENTS:

(A) FOUNDATION:

- a) Introduction to Research, b) Definitions of Research
c) Purpose of Research, d) Structure of Research

(B) SELECTION OF TOPIC:

- a) Relevance b) Avoidance of duplication c) Feasibility d) Acceptability e)
Applicability f) Affordability g) Ethical consideration

Criteria Points

(C) CONCEPTS OF MEASUREMENT:

- a) Reliability and Validity of Measurements, b) Types of measurements
c) Screening of tests

DESIGN OF CLINICAL RESEARCH:

- A)** Studies Design(introduction, selection of design)
B) Research Questioner, Validity and reliability of research findings
C) Confounding factors, strategies to deal with threats to validity.

Recommended Books:

- 1) Foundation of Clinical Research by Portney (1993)
- 2) A Guid to Research Methodology , Biostatics, and Medical writing by College of Physician and surgeons Pakistan by WHO Collaboration.

Paper – 6: Ethics & Management (7th Semester)

PAPER	6		
TOTAL MARKS : 100			CREDIT HOURS 2
INTERNAL MARKS	40	EXTERNAL MARKS 60	TIME: 3 HRS

COURSE OBJECTIVE:

To introduce to the student of medical ethics their behavior with patients and medical staff and management of different wards, departments includes the equipments records and their duties

THEORY CONTENTS:

ETHICS:

- (A) Ethical Conduct
- (B) Relation with Patient, Doctor and Co-workers
- (C) Preparation and Uses of Records, report, physical plant and equipment
- (D) Ethics relating to Current Social and medical Policy in the paramedic Society.

Management:

- (A) Features of a Health Care System
- (B) Role of paramedics within the system
- (C) Interrelationship in Departments in Health Care System
- (D) Clinical record of patient and equipments.

PRINCIPLES OF MANAGEMENT:

Elementary features of hospital Wards, Units ,and factors (Budgetory, Architechral), Control, Quality control. Total quality Control, Continuous Control.

Recommended Book:

Foundation of Clinical Research by Portney LG Walkais MP in 1993, Publisher by Appleton and lauge USA.

Medical Ethics by Dr. Mehmood Alam, in 2006,by health Department of kpk.

8th SEMESTER**PAPER: 1 ENDODONTICS (8th SEMESTER)**

TOTAL MARKS: 100
INTERNAL MARKS: 40

CREDIT HOURS: 3(2+1)
EXTERNAL MARKS: 60

OBJECTIVES:

To introduce the students with the basics of Endodontics so that to assist an Endodontist skillfully and to provide minor emergency treatment to patients and to operate under-supervision.

THEORY CONTENTS:

- A) Introduction to Endodontics.
- B) Pulpal Anatomy of root canal and Access preparation.
- C) Endodontics Microbiology.
- D) Pulp and Periapical Pathosis.
- E) Indications And Contra-indications of Root Canal treatment
- F) Pulp protection and Preservation of Apex.
- G) Endodontics Instruments and Radiography.
- H) Isolation.
- I) Steps in Root Canal treatment
- J) Causes of Failure of Root Canal Treatment

CLINICAL WORK:

- a) Root Canal treatment of Deciduous teeth and Anterior permanent teeth
- b) Pulp Capping
- c) Pulpotomy
- d) Endodontics instruments Care and Disinfection

Recommended Books:

- . Contomprary of Endodontics
- . Mahmood Torabinajad

Paper – 1: ORAL & MAXILLO- FAXIAL SURGERY – II (8th Semester)

PAPER:	1		
TOTAL MARKS: 100			CREDIT HOURS 1+2
INTERNAL MARKS 40		EXTERNAL MARKS 60	TIME: 3 HRS

THEORY CONTEN:

- A) Local Anesthesia in oral Surgery(in Adults and children)
- B) Post-operative patient management
- C) Management of Extractions and its Complications
- D) Basics of Oral Surgery in Children
- E) Pharmacology related to Surgery(in adults and children)
- F) Implantology (introduction, Classification of implants)
- G) Indications and contraindications of implants
- H) Post-implant Care

PRACTICLE WORK:

- a) Use of Surgical instruments
- b) Instruments used in Pediatric surgery
- c) Sterilization techniques
- d) Dealing disabled children

Recommended Books:

1. Contemporary of Oral Maxillofacial surgery
2. Handbook of Paeds by Cameron
3. OMS by kurger

Paper – 3: ORTHODONTICS – II (8th Semester)

PAPER: 2

TOTAL MARKS : 100

CREDIT HOURS 1+2

INTERNAL MARKS 40

EXTERNAL MARKS 60

TIME: 3 HRS

THEORY CONTENT:-

Fixed Appliances

- Introduction of various fixed appliances
- Fabrication of
 - Tran palatal arch
 - Bilateral palatal distalizer
 - Distal jet
 - Soldered and splinted Hyrax

Anchorage Appliance

- TPA Nance
- TPA Nance with extended arm
- Lingual holding arch

Space Maintainers

- Distal Shoe shape space maintainer

Splints

- Surgical splints
- Orthographic wafers splints
- Jigs splints

PRACTICAL WORK

- **Orthodontics**
- **Fixed Appliances**
- Tran palatal. (Method of articulation, wax up, flasking, processing, finishing & polishing).
- Bilateral palatal distalizer. (Method of articulation waxes up, flasking, processing, finishing & polishing).
- Distal Jet. (Method of articulation waxes up, flasking, processing, finishing & polishing).
- Soldered and splinted hyrax. (Method of articulation waxes up, flasking, processing, finishing & polishing).

Anchorage Appliances

- TPA Nance (Method of articulation, wax up, flasking, processing, finishing & polishing).

Space Maintainer

- Distal shoe shape space maintainer (Method of articulation, wax up, flasking, processing, finishing & polishing).
- Splints (Method of articulation, wax up, flasking, processing, finishing & polishing).
- Surgical Splints (Method of articulation, wax up, flasking, processing, finishing & polishing).
- Orthogenetic wafer splints (Method of articulation, wax up, flasking, processing, finishing & polishing).
- Jig splints (Method of articulation, wax up, flasking, processing, finishing & polishing).

Recommended Books

- A Text Book of Orthodontics by W.J. Houston
- Orthodontics Appliances by Adam and Philips

Paper – 4: Introduction to Clinical Work (8th Semester)

TOTAL MARKS: 100
INTERNAL MARKS: 40

CREDIT HOURS: (2+1)
EXTERNAL MARKS: 60

OBJECTIVES:

To introduce the students with the Basics procedures of dental setup so that to provide their best in a Dental team and individually as well.

THEORY CONTENTS:

- (A) Mixing and Manipulation of Dental Cements;
 - a) Zinc-Oxide phosphate Cement for luting and as a base
 - b) Mixing of GIC for Filling and Luting
 - b) Mixing of Zinc-Oxide Eugenol as a Base and Temporary filling material
 - c) Mixing of CaOH for Cavity Linnig
- (B) Mixing and Manipulation of Parmanent Filling Materials;
 - a) Amalgam
 - b) Composite
- (C) Alginate impression technique
- (D) Elastomeric impression technique
- (E) Non-elastomeric impression technique
- (F) Direct Restorative materials
- (G) Indirect restorative materials

PRACTICAL WORK:

- a) Introduction to dental setup
- b) Mixing of impression materials
- c) Mixing of filling materials
- d) Under-supervision practice work on patients
- e) Standarded Techniques for Upper and Lower impressions

Recommended books:

Stiffen rough Clinical Practice in Dentistry.

RESEARCH PROJECT

TOTAL MARKS: 200
INTERNAL MARKS: 100

CREDIT HOURS: (06)
EXTERNAL MARKS: 100

Aims and Objectives

- The student will learn some basic research methodology, gain knowledge of the specific area of cardiology being researched and have the opportunity for more extensive one-on-one interaction with a member of the cardio logical staff. It will hopefully result in some form of presentation or publication for the student. This is most suitable for students planning to enter cardiology as a career

Course Detail

- Preparation and evaluation of Technical Comparative statement of specifications of cardiac modalities
Students will select a modality item among the Medical cardiac modalities and prepare a comparative Statement of same modality manufactured by various manufacturers.
- Comparison of two different Modalities for any specific investigation Students will select a topic under the guidance of their teacher to compare the investigation of two different modalities for the same human body system

Example:

- (i) Renal function test of Nuclear Medicine and IVP
 - (ii) Renal function test versus Ultrasound
 - (iii) Angiocardiology versus Nuclear medicine Cardiac Investigation
- Students will prepare a comprehensive report on their selected research topic.