



**SHAHEED ZULFIQAR ALI BHUTTO MEDICAL  
UNIVERSITY ISLAMABAD**

**INTEGRATED CURRICULUM**

*for*

**BDS SECOND YEAR**

**Session 2020**

## Curriculum Committee

Curriculum Committee for the development of modular system at the undergraduate level of all medical and dental colleges affiliated with Shaheed Zulfiqar Ali Bhutto Medical University consists of following members:

- Brig. (R) Manzoor Ahmad      Chairman      Rawal Institute of Health Sciences
- Prof. Zahoor Rana              Vice Chairman      Shaheed Zulfiqar Ali Bhutto Medical University
- Prof. Haroon Shahid Qazi      Secretary      Islamabad Medical & Dental College
- Prof. Anser Maqsood              Member      Shaheed Zulfiqar Ali Bhutto Medical University
- Prof. Rehmah Sarfraz              Member      Islamabad Medical & Dental College
- Prof. Saima Azam                  Member      Islamabad Medical & Dental College
- Dr. Khalid M. Siddiqi              Member      Islamabad Medical & Dental College
- Dr. Fouzia Sultana                  Member      Shaheed Zulfiqar Ali Bhutto Medical University
- Dr. Zainab Abdullah              Member      Shaheed Zulfiqar Ali Bhutto Medical University

## Modular Curriculum Development Committee

The integrated modules for 2<sup>nd</sup> Year BDS Class have been developed by the following faculty members:

### Department of Pathology

- |                      |               |                                    |
|----------------------|---------------|------------------------------------|
| 1. Dr. Naheed Naghmi | Professor     | Islamabad Medical & Dental College |
| 2. Dr. Shamim Mumtaz | Professor     | Islamabad Medical & Dental College |
| 3. Dr. Khawaja Usman | Professor/HOD | Rawal Institute of Health Sciences |
| 4. Dr. Ashok kumar   | Professor/HOD | HBS Medical & Dental College       |

### Department of Pharmacology

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|-------------------|---------------|------------------------------------|
| 1. Dr. Shah Murad | Professor/HOD | Islamabad Medical & Dental College |
| 2. Dr. Azam Zia   | Professor/HOD | Rawal Institute of Health Sciences |
| 3. Dr. Randhawa   | Professor/HOD | HBS Medical & Dental College       |

### Department of Science of Dental Materials

- |                       |                     |   |
|-----------------------|---------------------|---|
| 1. Dr. Shahab Ud Din  | Assistant Professor | Shaheed Zulfiqar Ali Bhutto<br>Medical University |
| 2. Dr. Muhammad Sajid | Associate Prof/HOD  | Islamabad Medical & Dental<br>College             |
| 3. Dr. Sadaf Hamayoun | Assistant Prof/HOD  | Rawal Institute of Health Sciences                |

### Department of Community Dentistry

- |                      |                    |                                    |
|----------------------|--------------------|------------------------------------|
| 1. Dr. Rubina Mumtaz | Professor/HOD      | Rawal Institute of Health Sciences |
| 2. Dr. Sheze Haroon  | Assistant Prof/HOD | Islamabad Medical & Dental         |

# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## CURRICULUM FRAMEWORK: BDS 2<sup>ND</sup> YEAR

<b>2<sup>nd</sup> Year BDS</b>	<b>BLOCK-IV</b>		<b>Exam Block IV</b>	<b>Block-V</b>		<b>Exam Block V</b>	<b>Block-VI</b>		<b>Exam Block VI</b>
	<b>12 weeks</b>			<b>12 weeks</b>			<b>12 weeks</b>		
	Module 7	Module 8		Module 9	Module 10		Module 11	Module 12	
	Basics of paraclinical Dental Sciences	Disease and Epidemiology		Prevention and restoration in Dentistry	Disease and Therapeutics		Behavioral Sciences	Neoplasia, Indirect Restorations	
	6 weeks	6 weeks		6 weeks	6 weeks		6 weeks	6 weeks	

# Block IV

## 12 Weeks

### Main Topics and Table of Specifications

#### Pathology

Module 7		
Topic	MCQs	OSPE
Cellular adaptation/cell injury/cell death	10	1
General Bacteriology	8	2
Module 8		
Inflammation and Repair	10	1
General Bacteriology (Cont.)	7	1

#### Pharmacology

Module 7		
Topic	MCQs	OSPE
General Pharmacology	8	2
Autonomic Nervous System	12	1
Module 8		
Antimicrobials	15	2

## Science of Dental Materials

Module 7		
Topic	MCQs	OSPE
Introduction & Classification of Dental Biomaterials	1	-
Properties of Dental Materials and their Biocompatibility	9	-
Impression Materials	7	2
Module 8		
Structure & Properties of Metals & Alloys	3	-
Wrought Alloys	5	-
Gypsum Products	7	1

## Community Dentistry

Module 7		
Topic	MCQs	OSPE
Science, philosophy and ethics of dental public health	5	1
Concepts of health, illness, disease and preventive approaches	5	
Global health organizations and their role in global public health	3	
Module 8		
Science and application of dental caries and oral hygiene indices	8	1
Science and application of Periodontal and fluorosis indices; WHO assessment tools	8	1

Pakistan's healthcare system and the dental workforce	3	-
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## Pre-clinical Dentistry

Module 7		
Topic	MCQs	OSPE
Manipulation of wrought wires (stainless steel)	3	1
Kennedy's Classification of partially dentate arches		-
GV Black's classification		-
Principles of tooth preparation		-
Class I cavity preparation on plaster models		1
Module 8		
Manipulation of impression materials	3	2
Manipulation of gypsum materials		
Class I compound cavity preparation		
Class I cavity preparation on typodont		

## Examination Block-IV

# Block-V

12 weeks

## Main Topics and Table of Specifications

### Pathology

Module 9		
Topic	MCQs	OSPE
Immunity	5	-
Oral Infections	3	1
Gastrointestinal Infections	7	1
Module 10		
Hemodynamics	6	-
Hematology	6	1
Blood Born Infections	5	1
Cardiovascular System	3	1

### Pharmacology

Module 9		
Topic	MCQs	OSPE
Gastrointestinal Tract	5	1
Endocrinology	6	1
Autacoids	1	-



Antihistamines	1	-
<b>Module 10</b>		
Cardiovascular System	10	1
Diuretics	2	-
Blood	8	1
Antimalarial Drugs	2	1

## Science of Dental Materials

<b>Module 9</b>		
<b>Topic</b>	<b>MCQs</b>	<b>OSPE</b>
Dental Amalgam	7	1
Structure and Properties of Dental Polymers Prosthetic Polymers and Resins	8	1
Dental Waxes	2	-
<b>Module 10</b>		
Adhesion and Bonding Enamel & Dentin Bonding Agents	6	-
Resin Based Composites	7	1
Finishing & Polishing Materials	2	-

## Community Dentistry

<b>Module 9</b>		
<b>Topic</b>	<b>MCQs</b>	<b>OSPE</b>
General principles of epidemiology and measures of morbidity and mortality	8	1
Research Study Designs	8	1

Sampling and Bias	3	-
<b>Module 10</b>		
Variable types, data presentation and descriptive statistics	4	1
Hypothesis testing, confidence levels and intervals, p-value	4	
Tests of significance	3	
Sensitivity and specificity	2	

## Pre-Clinical Dentistry

Module 9		
Topic	MCQs	OSPE
Manipulation of auto-polymerizing resins	3	2
Demonstration on composite restoration		
Manipulation of amalgam		
Atraumatic Restorative Treatment (ART)		
Instrumentation for scaling (Handgrip and strokes)		
Pit and fissure sealing		
Fluoride application		
Module 10		
Maxillary & Mandibular Landmarks	3	1
Manipulation of modeling wax		
Class II cavity preparation		

## Block-V Examination

# Block-VI

## 12 Weeks

### Main Topics and Table of Specifications

#### Pathology

Module 11		
Topic	MCQs	OSPE
Neoplasia	12	1
Infections of Respiratory System	5	1
Module 12		
Genetic Diseases	5	-
Skin & Soft Tissue Infections	5	1
Infections of Central Nervous System	3	1
Infections of Genitourinary system	5	1

#### Pharmacology

Module 11		
Topic	MCQs	OSPE
Anticancer Drugs	3	1
Respiration	4	
Antituberculous Drugs	5	
Module 12		

Central Nervous System	17	3
Urinary Antiseptics	1	1
Drug-Drug Interactions	5	-

## Science of Dental Materials

Module 11		
Topic	MCQs	OSPE
Dental Cements	8	2
Dental Implant Materials	1	-
Casting Process	7	-
Endodontic Materials	1	-
Module 12		
Dental Casting Alloys	6	-
Investment Materials	2	1
Dental Ceramics	7	-

## Community Dentistry

Module 11		
Topic	MCQs	OSPE
Basic concepts and strategies for preventing and controlling major oral diseases	7	2
Methods of health promotion and health education	6	

occupational hazards in dentistry to human health and the environment	6	
<b>Module 12</b>		
Sociology, psychology and anthropology as applied to dentistry; Child psychology and dentist-patient relationship and dental anxiety	6	1
Principles and applications of the theories of behavior change	5	
The role of social determinants of health and their impact on health behavior	2	

## Pre-clinical Dentistry

<b>Module 11</b>		
Topic	MCQs	OSPE
Tooth arrangement	3	2
Class V cavity preparation		
Infiltration technique on phantom head		
Chair positioning for different procedures		
<b>Module 12</b>		
Manipulation of heat-polymerizing resins	3	2
Class III cavity preparation		
Mandibular nerve block technique on phantom head		

## Block VI Examination

# SHAHEED ZULFIQAR ALI BHUTTO MEDICAL UNIVERSITY

## BDS 2<sup>ND</sup> PROFESSIONAL EXAMINATION

### Assessment Grid for Class of 2019

70% Component from Prof Annual Exam: Theory and Practical: 140 + 140 30% Component from Internal Assessment: Theory and Practical: 60 + 60 Marks Theory: 600      Marks Practical: 600 Total Marks 1200							
Module/Block		Block-IV		Block-V		Block-VI	
		Module-7	Module-8	Module-9	Module-10	Module-11	Module-12
		Basics of paraclinical Dental Sciences	Disease and Epidemiology	Prevention and restoration in Dentistry	Disease and Therapeutics	Behavioral Sciences	Neoplasia, Indirect Restorations
Professional Examination	Theory Marks	100	100	100	100	100	100
		200		200		200	
	Practical Marks (OSPE)	200		200		200	
	Internal Assessment (IA) (30%)	Theory: 60 Practical: 60		Theory: 60 Practical: 60		Theory: 60 Practical: 60	
Subject Wise Distribution	Subjects	MCQs #	OSPE #	MCQs #	OSPE #	MCQs #	OSPE #
	Pathology	35	5	35	5	35	5
	Pharmacology	35	5	35	5	35	5
	Science of Dental Materials	32	3	32	3	32	3
	Community Dentistry	32	3	32	3	32	3
	Pre-Clinical Dentistry	6	4	6	4	6	4
	Total	140	20 (7 Marks each)	140	20 (7 Marks each)	140	20 (7 Marks each)
Theory Marks (70%)		140		140		140	
Practical Marks (OSPE) (70%)		20 X 7 = 140		20 X 7 = 140		20 X 7 = 140	

Theory	140	60 (IA)	200	140	60 (IA)	200	140	60 (IA)	200
OSPE	140	60 (IA)	200	140	60 (IA)	200	140	60 (IA)	200
Grand Total	400			400			400		

## BDS 2<sup>nd</sup> Professional Examination

### Internal Assessment Grid for Modular Program

<b>30% Component of Internal Assessment (IA): Theory and Practical 60 + 60</b>  <b>Marks Theory each Block: 60 Marks Practical (OSPE) each Block: 60</b>  <b>Total Marks: 120</b>												
<b>THEORY</b>												
<b>Internal Assessment</b>	<b>BLOCK-IV</b>				<b>BLOCK-V</b>				<b>BLOCK-VI</b>			
	End of Module 7 (EOM) Exam	End of Module 8 (EOM) Exam	SGDs	End of Block-IV (EOB) Exam	End of Module 9 (EOM) Exam	End of Module 10 (EOM) Exam	SGDs	End of Block-V (EOB) Exam	End of Module 11 (EOM) Exam	End of Module 12 (EOM) Exam	SGDs	End of Block-VI (EOB) Exam
	10	10	10	30	10	10	10	30	10	10	10	30
	20		10	30	20		10	30	20		10	30
<b>Total</b>	<b>20 + 10 + 30 = 60</b>				<b>20 + 10 + 30 = 60</b>				<b>20 + 10 + 30 = 60</b>			

<b>PRACTICAL (OSPE)</b>						
<b>Internal Assessment</b>	<b>BLOCK-IV</b>		<b>BLOCK-V</b>		<b>BLOCK-VI</b>	
	Module 7	Module 8	Module 9	Module 10	Module 11	Module 12
	End of Block-IV (EOB) Exam		End of Block-V (EOB) Exam		End of Block-VI (EOB) Exam	
	40		40		40	
<b>Practical (Log books)</b>	20		20		20	
<b>Total</b>	<b>40 + 20 = 60</b>		<b>40 + 20 = 60</b>		<b>40 + 20 = 60</b>	

## 2<sup>nd</sup> Professional – BDS Examination

### Assessment BDS 2<sup>nd</sup> Year

Students enrolled in 2<sup>nd</sup> Year BDS will be assessed during the year and at the end of the year. Assessment during the year will be counted as “internal assessment” and end of the year as “University assessment”. Distribution of weightage is 30% internal assessment and 70% University assessment.

#### Internal Assessment

- Internal assessment will be carried out by the respective college having 30 % weightage.
- Internal assessment will be calculated and added in the University assessment for each block (theory and practical/viva independent) for the final result of 2<sup>nd</sup> year BDS.

#### Distribution of internal assessment

Internal assessment will be calculated for theory and practical separately for each block examination. Distribution of marks for internal assessment during the year examination will be as follows;

#### Theory (Each Block)

This includes two Modules and one Block theory examination





## **University Assessment**

At the end of 2<sup>nd</sup> Year, University will conduct the annual examination for University assessment. This University professional examination carries 70% weightage in final assessment.

University examination will consist of Theory and Practical/Viva Voce components.

### **Theory Component**

As there are three blocks in 2<sup>nd</sup> year, there will be three block theory papers.

- |                                |           |
|--------------------------------|-----------|
| a. Theory paper 1 for Block IV | 140 Marks |
| b. Theory Paper 2 for Block V  | 140 Marks |
| c. Theory Paper 3 for Block VI | 140 Marks |

### **Pattern of Theory Paper**

Each end-of-block theory paper will have the following pattern;

- a) Each integrated theory paper will have components of following subjects;
  - I. Four horizontally integrated subjects i.e. Pathology, Pharmacology, Science of Dental Materials and Community Dentistry.
- b) The pattern of integrated each block theory paper will be as following;
  - i. 140 MCQs                      35 MCQs per subject                      1 Mark each MCQ (most of the MCQs will be one best type, scenario based)

## Summary of Marks for each block theory examination

**Total 400 marks**

### Theory Paper

- MCQs = 140 Marks
- Internal Assessment = 60 marks
- Total: 140 + 60 = 200 marks

### Practical/Viva Voce Component

This includes OSPE and Viva Voce examination for each block.

Block-IV	20 OSPE Station (5 each subject)	140 Marks
Block-V	20 OSPE Station (5 each subject)	140 Marks
Block-IV	20 OSPE Station (5 each subject)	140 Marks

### Pattern of Practical/Viva Voce

The pattern of practical/Viva voce examination per block will be as follows;

- 20 OSPE Stations      05 per subject      7 Marks per station
- There will be 2 interactive/Viva stations (one internal and one external) and 3 non-interactive stations for each subject.
  - For University professional examination, one external examiner for each subject will be called for conduction of OSPE in each block. This makes four external examiners for each block.

- Rest stations during OSPE will be over and above those twenty stations. Five or more (according to need) rest stations can be included.

### Summary of marks for each block Practical/Viva voce examination

**Total 200 marks**

#### Practical/Viva Voce

- 20 stations per block
- 7 marks per station
- 4 minutes per station
- $20 \times 7 = 140$  marks
- Internal Assessment = 60 marks
- Total =  $140 + 60 = 200$

### Summary of distribution of marks for the 2<sup>nd</sup> Professional University Examination

#### Theory

Paper	University Examination	Internal Assessment	Total
Block IV	140 Marks	60 Marks	200 Marks
Block V	140 Marks	60 Marks	200 Marks
Block VI	140 Marks	60 Marks	200 Marks
Total Marks			600 Marks

### **Practical/Viva Voce**

Practical/Viva Voce	University Examination	Internal Assessment	Total
Block IV	140 Marks	60 Marks	200 Marks
Block V	140 Marks	60 Marks	200 Marks
Block VI	140 Marks	60 Marks	200 Marks
Total Marks			600 Marks

### **Grand Total**

Examination	Theory	Practical/Viva Voce	Total
Block IV	200 Marks	200 Marks	400 Marks
Block V	200 Marks	200 Marks	400 Marks
Block VI	200 Marks	200 Marks	400 Marks
Grand Total Marks for 2 <sup>nd</sup> Year BDS			1200 Marks