



Women Dental College, Abbottabad

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STUDY GUIDE FINAL YEAR BDS ORTHODONTICS DEPARTMENT

Description:

Overview:

Program	Bachelor of Dental Surgery (BDS)
Course Name	Final year BDS-Orthodontics
Contact Hours	Clinicals:250 Lectures:45
Infrastructure Requirements	Lecture Hall Plaster room Orthodontic lab Cephalometric room

Faculty Responsible for Course Conduction:

Sr. No	Faculty	Designation
1.	Dr Nabila Anwar	Head of Department
2.	Dr Zobia Shafique	Senior Registrar
3.	Dr Jawad Shah	Senior Lecturer

Details Of Supporting Staff:

Sr. No	Staff	Designation
1.	Dr Jawad Tariq	TMO
2.	Dr Sehl Asher	TMO
3.	Dr Asad Ur Rehman	TMO
4.	Dr Syeda Multazam Ahmad	TMO
5.	Dr Muhammad Uzair	TMO
6.	Dr Aneela Baseer	TMO
7.	Dr Farheen Sajid	TMO
8.	Saifullah	Orthodontic Technician
9.	Faisal Khan	Orthodontic Technician
10.	Zain ul Abideen	DSA



11.	Zainab	DSA
12.	Saira	DSA

Objectives & Learning Strategies/TOS:

S.No.	Topic	Learning Outcomes	Teaching Hours	Mode of Teaching	Assessment Tools
1.	Craniofacial Growth	<ul style="list-style-type: none"> Differentiate between normal and abnormal growth. Analyze growth pattern leading to malocclusion. Evaluate amount and direction of growth 	05	lectures	MCQs SEQs Assignments
2.	Development of Dentition and Occlusion	<ul style="list-style-type: none"> Describe physiology of occlusal development Differentiate between the normal and abnormal path of eruption. Identify the dental age of patient. Predict future of occlusal factors 	02	Lectures Small group discussions	MCQs SEQs
3.	Etiology	<ul style="list-style-type: none"> Explain cause and effect relation. Classify the local and general causes. Identify the cause for interception. Compare genetic and environmental factors 	01	lecture	MCQs SEQs
4.	Occlusion	<ul style="list-style-type: none"> Describe features of 	01	lecture	Assignment



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		<p>dynamic and static occlusion</p> <ul style="list-style-type: none"> • Differentiate occlusal problems through eyeball technique 			
5.	<p>Diagnosis I- Clinical Examination II- Cast Analysis III- Ceph Analysis</p>	<ul style="list-style-type: none"> • Diagnose occlusal relationships on cast. • Identification of cephalometric landmarks • Perform cephalometric analysis. • Diagnosis of cephalometric analysis 	04	<p>Lectures Group discussions</p>	OSCE
6.	Bone Metabolism	<ul style="list-style-type: none"> • Describe the theories of tooth movement. • Discuss phases of biology of tooth movement • Identify normal structures in bone metabolism. • Classify types of orthodontic forces • Summarize factors affecting tooth movement 	02	lectures	MCQs SEQs
7.	Biomechanics	<ul style="list-style-type: none"> • Assess tissue response to orthodontic forces. • List materials for generation of therapeutic forces in orthodontics. • Design an orthodontic appliance for 	04	<p>Lectures Group Discussions Tutorials</p>	MCQs SEQs OSCE



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		<p>different types of teeth movements.</p> <ul style="list-style-type: none"> • Explain the concept of anchorage. • Classify anchorage 			
8.	Appliances	<ul style="list-style-type: none"> • Identify appliances for different malocclusions. • Summarize limitations of removable appliances • Identify growth modification appliance. • Describe different systems and components of fixed appliances 	04	Lectures tutorials	MCQs SEQs OSCE
9.	Interceptive and Preventive Orthodontics	<ul style="list-style-type: none"> • Describe management of space problems in mixed dentition • Identify eruption problems in mixed dentitions 	02	Lecture Small group discussions	MCQs SEQs
10.	Malocclusion	<ul style="list-style-type: none"> • Differentiate between class I, II and III malocclusions. • Describe various skeletal and dental characteristics of malocclusion. • Explain features of soft tissues for different malocclusions 	07	Lectures Tutorials	MCQs SEQs OSCE
11.	Treatment planning	<ul style="list-style-type: none"> • Diagnose a problem. • Formulate prioritized problem list. • Develop treatment 	02	Lectures Tutorials Group discussions	OSCE Assignments



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		plan of different malocclusion in different age groups.			
12.	TMJ/multidisciplinary	<ul style="list-style-type: none"> Discuss relationship of TMJ problems with malocclusions Organize sequence of treatment in multidisciplinary cases 	02	lectures	MCQs SEQs
13.	Surgical Orthodontics	<ul style="list-style-type: none"> Diagnose a case that requires combined surgical Orthodontic intervention 	01	lecture	MCQs SEQs
14.	Cleft lip and Palate	<ul style="list-style-type: none"> Explain pathophysiology of cleft lip and palate. Name different classification systems of cleft lip and palate. Describe the role of orthodontics in treatment of cleft lip and palate. 	02	lecture	MCQS
15.	Retention	<ul style="list-style-type: none"> Define relapse. Discuss concept of stable occlusion Plan different retention protocols as per requirement 	02	lectures	MCQs SEQs
16.	wire bending Cephalometry	<ul style="list-style-type: none"> Construct different components of appliances. Explain the purpose of each component. Illustrate cephalometric analysis. Interpret cephalometric values. 	250	Demonstrations	OSCE



Learning Resources:

Sr.No	Text/ Reference Books	Edition
1.	Contemporary Orthodontics by William R Proffit	6 th edition
2.	An Introduction to Orthodontics by Laura Mitchells	3 rd edition

Additional Learning Resources:

Hands on	Demonstrations, workshops, study models ,cephalograms
Lab Skills	Workshops, tutorials, wire bending
Videos	YouTube
Internet Resources	PubMed, Medline

Assessment Methods:

MCQs:

Multiple Choice questions; Single best Type

OSPE/OSCE: Objective Structured Practical/Clinical examination

Presentation:

Multiple Choice Questions:

1. Single best type MCQs have five options with one correct answer and four distractors are part of assessment.
2. Correct answer carries one mark, and incorrect will be marked zero. The rule of negative marking is not applicable.
3. Students mark their responses on specified computer-based designed sheets.



Objective Structured Practical/Clinical Examination

1. Nine OSCE stations are used for formative as well as summative assessment.
2. Time allocated for each station is five minutes as per Examination rules of Khyber Medical University, Peshawar.
3. All students are rotated through the same stations.
4. Stations used are unobserved, observed, interactive and rest stations.
5. On unobserved stations, models, lab reports, radiographs, flowcharts, case scenarios may be used to assess cognitive domain.
6. On observed station, examiners don't interact with candidate and just observe the performance of skills /procedures.
7. On interactive stations, examiners ask questions related to the task within the allocated time.
8. At rest station, students are not given any task. They just wait to move to the next station.

Presentation:

Students are given topics for presentation either individually or in groups. They are encouraged to prepare presentations on power point to enhance their understanding of the topic.

Internal Assessment Criteria:

1. 10% weightage of Internal Assessment in professional exam is policy of Khyber Medical University.
2. This Internal Assessment will comprise of the following components.

THEORY: Marks out of 10%

- Attendance.....5%
- Midterms.....2%
- Pre-Prof.....3%

PRACTICAL: Marks out of 10%

- Attendance.....4%
- Ward Test.....3%
- Logbooks.....2%
- Attitude.....1%



Examination Rules & Regulations:

1. One class test of the subject may be held monthly, marks of which will be included in internal assessment. Marks for class tests can vary according to syllabus and teachers' choice.
2. Mid-Term exam comprising 45 MCQs of single best type and 45 marks SEQs will be held in the middle of the session.
3. Pre-prof Exam comprising 45 MCQs of single best type and 45 marks SEQs will be conducted at the end of session before prep leaves.
4. The pattern of class tests, Mid-term & Pre-prof will be same as the Professional Exam taken by Khyber Medical University, Peshawar.
5. OSPEs will be conducted at the end of Mid-term & pre-prof Exam.

Feedback On Examination:

1. Students' feedback on assessment strategies will be taken in a preformed proforma for feedback twice a year i.e., Mid-term and pre-prof exams.
2. Feedback of theory as well as OSPE & Viva will be taken.
3. The Department of Medical Education & Quality Enhancement Cell in collaboration with Exam Cell of WDC is responsible to conduct this exercise.



Model Questions:

Multiple Choice Question

Question: A 10-year-old patient presented with space loss of 3mm due to early loss of primary second molar. What will be the protocol of interceptive orthodontics in this scenario?

- A: Space Supervision
- B: Space Regaining
- C: Space Maintenance
- D: Serial Extraction
- E: Space Management

Correct option is B.

**Reference: Contemporary Orthodontics by William R Proffit
6th Edition**

**Chapter: Moderate Non-Skeletal problems in Pre-adolescent Children:
Preventive and Interceptive Treatment in Family Practice**

Topic: Orthodontic Triage

Short Answer Question:

Question:

- A) Define anchorage.
- B) Classify different types of anchorage.

Answer:

A) Resistance to unwanted tooth movement is called anchorage.

B)

TYPES OF ANCHORAGE:

- Maximum anchorage
- Moderate anchorage
- Minimum anchorage
- Absolute anchorage

**Reference: Contemporary Orthodontics by William R Proffit
6th Edition**

Chapter: Biology of Tooth Movement

Topic: Anchorage



Suggestions For Next Academic Year:

- Students should be encouraged to read latest topics from list provided by American Board of Orthodontics.
- Article writing should be encouraged among students.
- Sessions of career counselling should be arranged for students.
- Students should be encouraged to attend workshops, to participate in different poster competitions at different forums.

Prepared By: Dr Nabila Anwar