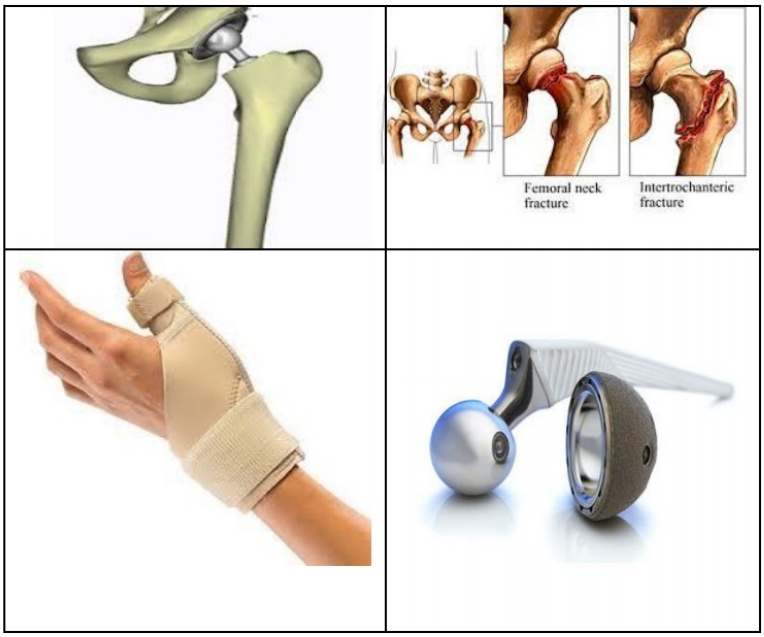
STUDY GUIDE

THE ORTHOPEDICS COURSE

(ORTHOPEDICS 1202531)



CREDIT HOURS: 4

5th YEAR MBBS (1443 -- 1444) (2022-23)

Course coordination

Female section**<<…Dr.Malik Azhar Hussain……** (…….drmalikazhar@nbu.edu.sa)>>

Male section**<<… Dr.Malik Azhar Hussain ……** (…….drmalikazhar@nbu.edu.sa)>>

Course Identification

1. Credit hours	<<…4 .>>
2. Level/year at which this course is offered	<<…5 th year MBBS.>>
3. Pre-requisites for this course	<<… **Course no 1202411(surgery1)**.>>

Course committee members

MODULE MEMBERS

Name	Department	E-mail
Dr. Majed Al-Rowaily	HOD Surgery College of medicine NBU AR AR	drfmajed@yahoo.com
Dr. Riyadh Al-ham Yahia	Surgery/ethics module coordinator	rylaham@hotmail.com
Dr. Malik Azhar Hussain	Surgery/orthopedics module coordinator	**drmalikazhar@yahoo.com**
Dr. Yasir Mehmood	Surgery/4th year course coordinator	**dr.yasir@yahoo.co.uk**
Dr. Muhammad Ayub	Surgery/EM module coordinator	dr.ayubjat@yahoo.com
Dr. Haider Usman	AP Surgery	haidermisbah2002@yahoo.com

Actual Learning Hours (Copy and paste the table from courses specification)

(based on academic semester)(1 credit hour=15 continuous hours)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	12
2	**BST**(clinical teaching rounds)	30
3	**Tutorial**	5
4	**PBL**	1
5	**Radiology (lectures)**	5
6	**Orthopedics Skill labs**	2
7	**Case Presentations**	5
	Total	60
***Other Learning Hours**		
1	**Study (SDL)**	30
2	**Assignments/**	10
3	**Library**	15
4	**Projects/Research Essays/Theses**	10
5	(specify) **Others**	
	Total	65

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

Course Objectives (Copy and paste the table from courses specification)

1. Course Description

This course is intended to help the students to gain the basic knowledge and skills to deal with orthopedics situations and problems with trauma of any type, mostly fractures The course is complementary to what the student has learned during the study of medicine. Beside the scientific knowledge and technical skills gained the student should be able to know the principles of orthopedics Student should be able to deal with different orthopedics problems of patients, and referral mode to colleagues and other medical professionals

2. Course Objective

1. **By the end of the Module the student will be able to:**
    a. Take a complete general orthopedics history from patient, Perform a full clinical examination of a musculoskeletal tissues, Understands common sports injuries ,Design treatment plans in sports medicines
    b. Understand common conditions associated with different joints, discuss the importance of rehabilitation, and learn the salient features relating to the history and examination of spine, Investigate common spinal disorders.
    c. Understand the anatomy, physiology, pathology, diagnosis and treatment of upper and lower limbs, Know common problems affecting the hip and knee, their anatomy and bio mechanics, principles of conservative or surgical treatment. Also appreciate equipment materials and instruments used in operations for internal fixation, and for external fixations.
    d. Discuss recent advances and minimal invasive surgery role in orthopedics, Describe importance of arthroscopy, Understand acute and chronic infections and their management in orthopedics, Discuss the neoplastic disease of bones, their investigations and treatment. Appreciate congenital anomalies and their treatment.
    e. Discuss Foot and ankle problems in different age groups, anatomy, biomechanics, neurological disease and treatment modalities of feet and ankle, Can apply any sort of dressing, back slabs, pop casts and manages post-operative orders by the orthopaedic surgeon

1. Course Learning Outcomes

	CLOs	Aligned-PLOs
1	**Knowledge and understanding:**	
1.1	Describe how to initially assess, diagnose and manage orthopedic patients as medical officer in orthopedics and preliminary ABCD before referring to orthopedic surgeon	K1
2	**Skills :**	
2.1	Interpret the results of clinical, laboratory, and radiological findings for proper problem solving and decision making	S1
2.2	Take history, perform physical examination, read basic X-ray	S3
2.3	Manage life or limb threatening orthopedic cases	S4
2.4	Propose the principles for management of common orthopedic problems	S5
2.5	Communicate effectively with the colleagues and instructors	S6
3		**Values:**
3.1	Practice ethically leadership and teamwork and inter-personal collaboration with the colleagues and instructors	V1
3.2	Operate self-learning from updated medical information from different approved sources in the web.	V2
3.3	Demonstrate the capacity for self-reflection and personal development	V5

Course Content (Copy and paste the table from courses specification)

CONTENTS OF THE ORTHOPEDICS COURSE

A. LECTURES

S NO	Title	Contact hour
1.	Classification of fractures	1
2.	Principles of fracture management	1
3.	Infections of bones and joints	1
4.	Lower limb orthopedics-I(from pelvic girdle to distal femer)	1
5.	Neoplastic diseases of bones and joints	1
6.	Upper limb orthopedics-I(from pectoral girdle to distal humerus)	1
7.	Amputations in orthopedics	1
8.	Pediatric orthopedics problems	1
9.	Sport injuries in orthopedics	1
10.	Spine orthopedics	1
11.	Upper limb orthopedics-II(from elbow to hand)	1

12.	Lower limb orthopedics-II(from knee to foot)	1

. PROBLEM –BASED LEARNING (PBL)

S NO	TITLE	Contact hour
1	Hip joint Fracture in old age	1

TUTORIALS

S NO	TITLE	Contact hour
1	Osteoarthritis	1
2	Rheumatoid arthritis	1
3	Compartment syndrome/carpel tunnel syndrome	1
4	Peripheral nerve injuries	1
5	Management of spinal injury	1

No	List of Topics	
	Topics Covered	**Contact Hours**
	Radiology& skill lab	7

...	Case presentation	5

No	List of Topics(BED SIDE CLINICAL TEACHING)	
	Topics Covered	**Contact Hours**
1	Orthopedic emergency cases in casuality	5
2	Equipment and instruments used in orthopedics	5
3	Clinical examination of upper limb,lower limb spine,joints and nerves	5
4	Fractures of upper limb,lower limb,spine	5
5	Acute trauma, sports trauma,acute and chronic infections	5
6	Benign and malignant tumours and ethical issues encountered in orthopedics	5
	TOTAL	30

Teaching strategies and Assessment Methods for Students (Copy and paste the table from courses specification)

Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0			Knowledge
	Knowledge		
1.1	Identify the basic of fractures and orthopedic problems and anatomy and physiology of joints	Lectures	- Witten exam
1.2	Define regional anatomy, physiology/pathology of musculoskeletal systems and mechanics and classification offracture etc.Also how to take consent, confidentiality and euthanasia?	Lectures Interactive/PBL/ Case Presentations	- Pbl checklist - Cp check list - Witten exam - Assignment in OSCE non interactive stations
1.3	Radiology and orientation of merterials/instruments used in orthopedics	Lectures/interactive	Writen exam OSCE non interactive stations
2	**Skills**		
2.1	Able to take history for long and short cases	Problem solving	Osce

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
2.2	Able to diagnose cases by clinical examination and radiology and other investigations	Lecture Case scenarios	Osce
2.3	Able to treat by himself as medical officer in hospital if alone ,the basic treatment	Case scenarios	Osce
2.4	Know the operations details to apply pop and back slab,assist orthopedic cases and able to segregate cases nessissitating refereals to big hospitals	Problem solving	Osce
3	**Competence**		
3.1	Operate the skill of self-learning	Case scenarios	Written exam/osce PBL check list CP Assignment
3.2	Evaluate the medical responsibilities of the different orthopedic cases	Case scenarios	Written exam PBL Assignment
3.3	Show the ability to work in a team with respect to all colleagues opinions	Case scenarios	Osce PBL check list CP Assignment

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
3.4	Interpret the cases of medical misconduct and malpractice	Case scenarios	Osce PBL check list CP Assignment
3.5	Demonstrate professionally the medical information to patients and their families.	Case scenarios	OSCE PBL check list CP Assignment

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	5 case presentations about twice weekly, in week 1 one and rest weeks 2 weekly	As per time schedule	5 percent
2	PBL one in two sessions. In second session everyone has to present the objectives of PBL in detail	As above	5 percent
3	Written test one best of 5 in 70 MCQs		50 percent
4	OSCE exam		40 percent
5			
6			
7			

#	Assessment task*	Week Due	Percentage of Total Assessment Score
8			

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

Assessment Tasks for Students (Copy and paste the table from courses specification)

Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	5 case presentations about twice weekly, in week 1 one and rest weeks 2 weekly	As per time schedule	5 percent
2	PBL one in two sessions. In second session everyone has to present the objectives of PBL in detail	As above	5 percent

#	Assessment task*	Week Due	Percentage of Total Assessment Score
3	Written test one best of 5 in 70 MCQs		50 percent
4	OSCE exam		40 percent

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

Course blueprint (% of total summative marks in blue print is to be given in the range)

Teaching and Assessment Blueprint
Orthopedics (Course code 1202531) Course title

Topics	Teaching strategies	Assessment methods	Knowledge			Skill			Competency			of % total contact hours	of % total summative marks
			K1	K2	…	S1	S2	…	V1	V2	…		
Classification of fractures	Lecture	Written exams	K1									1.66 %	%5-0
Principles of fracture management	Lecture	Written exams	K1									1.66 %	%5-0
Infections of bones and joints	Lecture	Written exams	K1									1.66 %	%5-0
Lower limb orthopedics-I(from pelvic girdle (femer to distal	Lecture	Written exams	K1									1.66 %	%5-0
Neoplastic diseases of bones and joints	Lecture	Written exams	K1									1.66 %	%5-0
pectoral Upper limb orthopedics-I(from	Lecture	Written exams	K1									1.66 %	%5-0

girdle to distal humerus)												
Amputations in orthopedics	Lecture	Written exams	K1								1.66 %	%5-0
Pediatric orthopedics problems	Lecture	Written exams	K1								1.66 %	%5-0
Sport injuries in orthopedics	Lecture	Written exams	K1								1.66 %	%5-0
Spine orthopedics	Lecture	Written exams	K1								1.66 %	%5-0
elbow to Upper limb orthopedics-II(from hand)	Lecture	Written exams	K1								1.66 %	%5-0
Lower limb orthopedics-II(from knee to foot)	Lecture	Written e xams	K1								1.66 %	%5-0
Osteoarthritis	Tutorial	Written exams	K1								1.66 %	%5-0
Rheumatoid arthritis	Tutorial	Written exams	K1								1.66 %	%5-0
Compartment syndrome/carpel tunnel syndrome	Tutorial	Written exams	K1								1.66 %	%5-0
Peripheral nerve injuries	Tutorial	Written exams	K1								1.66 %	%5-0
Management of spinal injury	Tutorial	OSCE						S 4			1.66 %	%5-0
Instruments revision	Skill lab	OSCE						S 4			3.03 %	%5-0
Clinical methods demonstration	Skill lab	OSCE						S 4			3.03 %	%5-0
NOF fracture in old age	PBL	PBL check list								C2	3.03 %	%5
(5Clinical case presentation (cases …… orthopedic	Inter - active	CP checklist								C3	15.1 %5	%5
Clinical examination	BST	OSCE					S				22.9	%10.9

/shoulder,knee,hip,spine,hand,nerves of ward round							2					%	
Orthopedic tumors,deformities,fractures e.g cases indoor limb,spine,infections/ ward round	BST	OSCE					S 2					22.9 %	%10.9

Learning Resources (Copy and paste the table from courses specification)

Learning Resources

Required Textbooks	**Clinical orthopedic examination by Ronald MaC Rae 6th edition 24 june 2010** **Cambels textbook of orthopedic surgery 14th edition (4 volumes set) 2021. Free on line.Publ Elseviers**
Essential References Materials	**Baileys and love textbook of surgery 27th edition 2018.** **Textbook of orthopedic medicine 5th edition (28/2/2017) by John Ebnezar. publisher JB med publisher's.** **Outlines of fracture management by Adams 14th edition**
Electronic Materials	By Google
Other Learning Materials	Recent advances in orthopeadics updates

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Class rooms in college
Technology Resources (AV, data show, Smart Board, software, etc.)	Auditorium for presentations
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	Indoor/out patient deptt. Of allied teaching hospitals for clinical learning

Related check lists

PBL

Case Presentation

Problem Based Learning - Rating Scale

PBL number_____session_____Topic_____Facilitator_____ _____Date_____

PBL-Stage 1 (Rate each student between 0-5, where 0 = means no effort by the student, and 5=means maximum effort by the student)

No	Observable behavior	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6	Student 7	Student 8	Student 9	Student 10
1	Participation in discussion	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
2	Active Listening	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
3	Interpersonal Skills	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
4	Knowledge of the topic	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
5	Proposes solution	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5

PBL-Stage 2 (Rate each student between 0-5, where 0 = means no effort by the student, and 5=means maximum effort by the student)

No	Observable behavior	Student 11	Student 12	Student 13	Student 14	Student 15	Student 16	Student 17	Student 18	Student 19	Student 20
1	Participation in discussion	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
2	Active Listening	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
3	Interpersonal Skills	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
4	Knowledge of the topic	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
5	Proposes solution	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5

Problem Based Learning - Rating Scale

PBL number_____session_____Topic_____Facilitator_____ _____Date_____

Number	Student name	Session 1	Session 2	Final score
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

Facilitator's Signature

ORTHOPEDICS COURSE

CLINICAL CASE PRESENTATION EVALUATION

DATE…… CASE DIAGNOSIS ……

Number	Student name	Arrangement of sequence 10	Complain & HPI 10	Differential diagnosis & support of professional diagnosis 10	Investigations & interpretations 10	Plan of managements 10	Total ma 50
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Dr……..
Signature……..

(Checklist must be aligned with the learning outcomes)

Course quality evaluation

After the end of the course, please give your **FEEDBACK** through the following QR code:

Course/module Coordinator	Dr. Malik Azhar Hussain
Department	General surgery
Date	2022-10 -31