



Sohag University



Faculty of Medicine

Orthopedics & Trauma surgery (ORT-527)

Study guide

Faculty of Medicine
Sohag University
2024 - 2025

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5th Year**Basic Information: Orthopaedics & Trauma surgery (ORT-527)**

Programme (s) on which the course is given:- <u>Bachelor of Medicine and Surgery (M.B.B.Ch.), (Credit points)</u>	Elements (<u>Major</u> / <u>Minor</u>) of the program: <u>Undergraduate</u>
Department offering the program:- <u>Orthopaedics & Trauma surgery department.</u>	Department offering the course:- <u>Orthopaedics surgery department.</u>
Academic Year/Level:	5th Year

A- Basic Information

Title:	Orthopaedics & Trauma surgery		
Code:	ORT-527		
Credit points: 5.5		Case based discussions: 46 hours	
Lectures: 15 hours		Clinical/practical training: 21 hours	
Prerequisites: Achieving 75% of points of blocks in the first 5 semesters.			
⊙Student learning activities:			
Portfolio tasks: case presentation (5-7 tasks/week);			total
tasks= 60 hours= 2 points/ Formative assessment (15hours= 0.5 point)			
Attendance.			
Total hours: 157 hours.			

Block Map

The total hours of the final written exam	Total marks	Days/weeks	Points	Code	Responsible department	Block	Year
paper	130	4 weeks	5.5	ORT-527	<u>Orthopaedics surgery department.</u>	ORT-527 قسم : جراحة العظام	5 th year

B- Professional Information

1 – Course Objective (Overall Aims):-

1. This block aims to provide students with fundamental knowledge and clinical skills that enable him/her to detect, manage and/or refer common and important orthopedics problems.
2. By the end of the blocks, the students will be able to take informative history, perform appropriately timed physical examination of patients appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive, do some clinical procedures and interpret important investigations related to orthopedics problems.

2- Competency-Based Medical Education areas:

By the end of the course, the graduate should be able to:

Competency Area I: The graduate as a health care provider.

The graduate should be able to:



- 1.1. Take and record a structured, patient centred history.
- 1.2. Adopt an empathic and holistic approach to the patients and their problems.
- 1.3. Assess the mental state of the patient.
- 1.4. Perform appropriately timed full physical examination of patients, appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive.
- 1.5. Prioritize issues to be addressed in a patient encounter.
- 1.6. Select the appropriate investigations and interpret their results taking into consideration cost/ effectiveness factors.
- 1.7. Recognize and respond to the complexity, uncertainty, and ambiguity inherent in medical practice.
- 1.8. Apply knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand.
- 1.10. Integrate the results of history, physical and laboratory test findings into a meaningful diagnostic formulation.
- 1.11. Perform diagnostic and intervention procedures in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances.
- 1.12. Adopt strategies and apply measures that promote patient safety.
- 1.13. Establish patient-centred management plans in partnership with the patient, his/her family and other health professionals as appropriate, using Evidence Based Medicine in management decisions.
- 1.14. Respect patients' rights and involve them and /or their families / carers in management decisions.
- 1.15. Provide the appropriate care in cases of emergency, including cardio-pulmonary resuscitation, immediate life support measures and basic first aid procedures.

Competency area II: The graduate as a health promoter.

The graduate should be able to:

- 2.5. Describe the principles of disease prevention, and empower communities, specific groups or individuals by raising their awareness and building their capacity.
- 2.6. Recognize the epidemiology of common diseases within his/her community and apply the systematic approaches useful in reducing the incidence and prevalence of those diseases.
- 2.9. Adopt suitable measures for infection control.

Competency area III: The graduate as a professional.

The graduate should be able to:

- 3.1. Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.
- 3.3. Respect the different cultural beliefs and values in the community they serve.



- 3.4. Treat all patients equally, and avoid stigmatizing any category regardless of their social, cultural, ethnic backgrounds, or their disabilities.
- 3.5. Ensure confidentiality and privacy of patients' information.
- 3.6. Recognize basics of medico-legal aspects of practice, malpractice and avoid common medical errors.
- 3.7. Recognize and manage conflicts of interest.
- 3.8. Refer patients to the appropriate health facility at the appropriate stage;
- 3.9. Identify and report any unprofessional and unethical behaviors or physical or mental conditions related to himself, colleagues or any other person that might jeopardize patients' safety.

Competency Area IV: The graduate as a scholar and scientist

The graduate should be able to:

- 4.5. Identify various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of illness/disease and explain the ways in which they operate on the body (pathogenesis).
- 4.7. Describe drug actions: therapeutics and pharmacokinetics; side effects and interactions, including multiple treatments, long term conditions and non-prescribed medication; and effects on the population.
- 4.8. Demonstrate basic sciences specific practical skills and procedures relevant to future practice, recognizing their scientific basis, and interpret common diagnostic modalities, including: imaging, electrocardiograms, laboratory assays, pathologic studies, and functional assessment tests.

Competency area V: The graduate as a member of the health team and part of the health care system.

The graduate should be able to:

- 5.1. Recognize the important role played by other health care professionals in patients' management.
- 5.2. Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient Management.
- 5.3. Implement strategies to promote understanding, manage differences, and resolve conflicts in a manner that supports collaborative work.
- 5.4. Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system.
- 5.5. Communicate effectively using written health records, electronic medical records, or other digital technology.
- 5.6. Evaluate his/her work and that of others using constructive feedback.



- 5.7. Recognize own personal and professional limits and seek help from colleagues and supervisors when necessary.
- 5.9. Use health informatics to improve the quality of patient care.
- 5.10. Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements.
- 5.12. Demonstrate accountability to patients, society, and the profession.

Competency Area VI: The graduate as a lifelong learner and researcher.

The graduate should be able to:

- 6.1. Regularly reflect on and assess his/her performance using various performance indicators and information sources.
- 6.2. Develop, implement, monitor, and revise a personal learning plan to enhance professional practice.
- 6.3. Identify opportunities and use various resources for learning.
- 6.4. Engage in inter-professional activities and collaborative learning to continuously improve personal practice and contribute to collective improvements in practice.
- 6.6. Effectively manage learning time and resources and set priorities.
- 6.8. Critically appraise research studies and scientific papers in terms of integrity, reliability, and applicability.
- 6.10. Summarize and present to professional and lay audiences the findings of relevant research and scholarly inquiry.



3- Intended Learning outcomes of course

Each competency will be broken down into one or more learning outcomes that may be Knowledge and understanding (A), Skills (practical/clinical) (C) or Attitudes and behavioral (D) or all.

NARS Key competencies	Learning outcomes for each key competencies	Domain Know, Know how, Show how, Does	Teaching method	Assessment method
1.1. Take and record a structured, patient centered history.	C1. Perform a focused history based on all relevant information (including obtaining data from secondary sources) in the following common clinical problems: • Knee problems • Spine problems • Peripheral nerve problems • Hand and tendons injuries • Fractures of long bones and pelvis • Emergency management • Bone tumors • Bone and joint infections	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	C2. Document and present the clinical encounter (case) concisely in an oral presentation, as a written document, and entered into an electronic medical record in the following common clinical problems: -Clinical problems Mentioned in C1.	Show how	Skill lab or bed- side Mini - CEX training OSCE Training	Portfolio OSCE ACC



1.2. Adopt an empathic and holistic approach to the patients and their problems.	A1. D1. Address psychological and social factors when assessing patients and developing care plans in any clinical situations.	Know how	Cases	Quizzes Formative written Final written Portfolio
	- Mentioned in C1 & C10	Show how	Skill lab orbed side Mini - CEX training OSCE training	OSCE ACC
	D2. Interact with patients showing 7 key tips of empathic and holistic approach: • Making eye contact • Let your patient know you're listening • Be aware of your body language • Be curious about your patient • Record details that humanize your patient • Show support to your patient • Look deeper for ways to empathize with your patient	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	C4. Establish that patients are attentive—eg, by assessing their level of attention while the history is taken or by asking them to immediately repeat 3 words	Show how	Skill lab or bed- side Mini - CEX training OSCE Training	Portfolio OSCE ACC



1.3 Assess the mental state of the patient.	C5. Perform an assessment of vital signs	Show how	Skill lab orbed side Mini - CEX training OSCE Training	Portfolio OSCE ACC
	C6. Perform a detailed physical examination of all body systems	Show how	Skill lab orbed side Mini - CEX training OSCE Training	Portfolio OSCE ACC
1.4. Perform appropriately timed full physical examination of patients appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive.	C7. Perform a focused physical examination based on the patient's chief complaint and review of systems in the following common clinical problems: -Mentioned in C1	Show how	Skill lab orbed side Mini - CEX training OSCE Training	Portfolio OSCE OSPE ACC
	C8. Detect all significant abnormal findings on physical examination in the following common clinical problems: • Mentioned in C1 & C7.	Show how	Skill lab orbed side Mini - CEX training OSCE Training	Portfolio OSCE OSPE ACC
	C9. Report findings in notes	Show how	Skill lab orbed side Mini - CEX training OSCE Training	Portfolio OSCE OSPE ACC



1.5. Prioritize issues to be addressed in a patient encounter.	C10. D3. Identify the cultural concerns and goals of patients and their families for a specific encounter during the interaction with a stable patient presenting with one of the following straightforward problems: • Lumbar disc prolapse • ACL injury • Knee osteoarthritis • DDH, CTEV	Show how	Skill lab orbed side Mini - CEX training OSCE Training	Portfolio OSCE OSPE ACC
1.6. Select the appropriate investigations and interpret their results taking into consideration cost/effectiveness factors.	C11. Select common investigations relevant to the findings on history and physical examination in the following common clinical problems: mentioned in C1 & C10	Know how Show how	Skill lab orbed side Mini - CEX training OSCE Training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
		Know	Lectures	Quizzes
	A3. Describe the purpose of common diagnostic tests, including blood tests, tests of other body fluids, and basic imaging tests relevant to the following common clinical problems: • Mentioned in C1, C7, C10			Formative written Final written
	C12. Interpret in a simulated case, the results of the following commonly ordered tests. • Mentioned in C1, C7, C10	Show how	Skill lab orbed side Mini - CEX training OSCE Training	Portfolio OSCE OSPE ACC



1.7. Recognize and respond to the complexity, uncertainty, and ambiguity inherent in medical practice.	A4. & C13. Recognize that there is a degree of uncertainty in all clinical decision making.	Know how	Cases	Quizzes Formative written Final written
		Show how	Skill lab or bed- side Mini - CEX training OSCE Training	Portfolio OSCE OSPE ACC
	A5. & C14. Identify clinical situations in which complexity, uncertainty, and ambiguity may play a role in decision-making.	Know how	Case	Quizzes Formative written Final written
	Mentioned in C1	Show how	Skill lab or bed side Mini - CEX training OSCE Training	Portfolio OSCE OSPE ACC
1.8. Apply knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand.	A6. Integrate and apply knowledge of foundational Biomedical and clinical topics together with clinical skills to diagnose and address the following common medical problems: Mentioned in C1, C7, C10	Know how	Cases	Quizzes Formative written Final written
	A7. C15. Formulate a broad differential diagnosis for each problem, based on the clinical encounter and investigations done to date in a stable patient presenting with one of the following straightforward problems: Mentioned in C10	Know	Lecture	Quizzes Formative written Final written
		Know how	Case	
		Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC



1.10. Integrate the results of history, physical and laboratory test findings into a meaningful diagnostic formulation.	A8. C16. Propose a most likely or working diagnosis for each problem based on the clinical encounter and investigations done to date in a stable patient presenting with one of the following straightforward problems: • Mentioned in A7. C15.	Know Know how Show how	Lecture Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
	A9. C17 Formulate a broad differential diagnosis for each problem, based on the clinical encounter and investigations done to date in an emergency or acute illness patient presenting with one of the following: • ATLAS • Fracture management • Bone and joint infections	Know Know how Show how	Lecture Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
1.11. Perform diagnostic and intervention procedure C2 in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances.	A10. Describe the indications for the following essential medical procedures (diagnostic and intervention), how they are performed, common risks, and follow-up care • Emergency Procedures	Know	Lecture	Quizzes Formative written Final written
	A11. C18.	Know	Lecture	Quizzes



	Implement plans for care prior to any of the following procedures Mentioned in C1	Show how	Skill lab orbed side Mini - CEX training OSCE training	Formative written Final written Portfolio OSCE OSPE ACC
	C19. D4. Perform the following essential medical procedures in a supervised or simulated setting Slabs for fractures	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC
	C20. Implement plans following the following procedures, including monitoring for post-procedure complications and intervening effectively for major complications that occur. Assessment of neurovascular bundle	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC
1.12. Adopt strategies and	A12. Recognize examples of patient safety incidents (adverse events, error, near misses, preventable adverse event) in the clinical setting Mentioned in C1	Know Know how	Lecture Case	Quizzes Formative written Final written



apply measures that promote patient safety.	A 13. Differentiate between cases where an adverse event has occurred from those that are due to the underlying medical illness in the following clinical situation. • Bone and joint infections	Know how	Case	Quizzes Formative written Final written
	A 14.	Know how	Case	Quizzes
	Demonstrate disclosure of a simple medical error to a patient or family (e.g., inadvertent cancellation of a test), In the following clinical cases as an example Mentioned in C1			Formative written Final written
	A15. Propose an approach to reducing the frequency of medical error in response to a patient safety using an example Mentioned in C1	Know how	Case	Quizzes Formative written Final written
1.13. Establish patient-centered management plans in partnership with the patient, his/her family and other health	A16. C21. Formulate a broad differential diagnosis for each problem, based on the clinical encounter and investigations done to date in a stable patient presenting with one of the following straightforward problems: • Mentioned in C10	Know	Lecture	Quizzes Formative written Final written
		Know how	Case	
		Show	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC



professionals as appropriate, using Evidence Based Medicine in management decisions.	A17. C 22. Establish a therapeutic and management plan with appropriate timelines and follow up in a patient presenting with any of one or more of the following acute illnesses and/or complex problems, Mentioned in C1	Know Know how Show	Lecture Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
1.14. Respect patients' rights and involve them and /or their families/careers in management decisions.	D5. Exhibit honesty and integrity with patients, physicians and other health professionals. D6. Demonstrate caring and compassion during all interactions with patients. D7.	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	Recognize the importance of trusting relationships with patients and others. D8. Recognize and maintain boundaries when interacting with patients. A 9. Demonstrate sensitivity with respect to peers, colleagues, and patients. - As Mentioned in C1 &C10			
	A18. D10. Consistently maintain patient confidentiality in all clinical, social and electronic settings, while recognizing situations that require disclosure of confidential information.	Know how Show how	Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSPE ACC



	A19. Describe the underlying ethical principles and legal process of informed consent	Know how	Case	Quizzes Formative written Final written
	A20. C23. Describe the process of how to obtain informed consent for a test or treatment procedure	Know how Show how	Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
1.15. Provide the appropriate care incases of emergency, including cardio-pulmonary resuscitation , immediate life	A21. Describe the characteristics of an acutely ill patient in terms of findings on history, physical examination and basic laboratory investigations in the following clinical situations	Know Know how	Lecture Case	Quizzes Formative written Final written
support measures and basic first aid procedures.	• ATLAS			
	A22. C24. Recognize when a patient has abnormal vital signs that requires immediate attention and investigation in the following clinical situations • ATLAS	Know Know how Show how	Lecture Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC



	A23. C25. Recognize when a patient has a complaint or physical finding that suggests the possibility of a severe illness (including life- threatening) and therefore requires immediate attention and investigation in the following clinical situations Mention in A22. C24.	Know Know how Show	Lecture Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
	A24. Apply the steps taken in the emergency care of acutely ill patients in the following clinical situations Mention in A22. C24.	Know Know how	Lecture Case	Quizzes Formative written Final written
	A25. C26. Identify potential underlying causes of a patient's deterioration in the following clinical situations Mention in A22. C24.	Know Know how Show how	Lecture Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
	C27 Start the initial emergency care plan for a patient with the following	Show how	Skill lab orbed side Mini - CEX training	Portfolio OSCE ACC
	common life- threatening conditions Mentioned in A9, C17		OSCE training	



2.5 Describe the principles of disease prevention, and empower communities, specific groups or individuals by raising their awareness and building their capacity.	A26 Apply preventive measures for the following health problems: - Joint osteoarthritis - Lumbar Disc Disease	Know Know how	Lecture Case	Quizzes Formative written Final written
2.6 Recognize the epidemiology of common diseases within his/her community, and apply the systematic approaches useful in reducing the incidence and prevalence of those diseases.	- A27 Apply methods reducing the incidence and prevalence of following common diseases. -Mention in A26.	Know Know how	Lecture Case	Quizzes Formative written Final written
	- A28 Identify and apply screening tests appropriate at different life stages	Know Know how	Lecture Case	Quizzes Formative written Final written
2.9 Adopt suitable measures for infection control.	- - A28. C28 Apply principles of patient safety related to infection prevention and control practices in the following situations Bone and joint infections	Know Know how Show how	Lecture Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC



	A2, C29. Demonstrate the procedures involved in universal body substance precautions, including handwashing, and donning and doffing of gowns, gloves, masks, and eye protection	Know Know how Show how	Lecture Case Skill lab orbed side Mini - CEX training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
			OSCE training	
	A30. C30. Apply principles of infection control when dealing with a patient who may have a communicable Disease	Know Know how Show how	Lecture Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
3.1. Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	- A31. D11. Demonstrate the ability to give feedback to colleagues in a respectful manner.	Know how Show how	Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
3.3. Respect the different cultural beliefs and values in the community they serve.	-A32. D12. Demonstrate the application of patient autonomy and respect for persons in specific case situations	Show	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC



3.4. Treat all patients equally, and avoid stigmatizing any category regardless of their social, cultural, ethnic backgrounds, or their disabilities.	- A33. D13. Identify medicolegal principles that obligate physician to Treat all patients equally,	Know Know how Show how	Lecture Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	- D14. Demonstrate in clinical encounters avoiding stigmatizing any category	Show how	Skill lab orbed side Mini - CEX training	Portfolio OSCE ACC
	regardless of their social, cultural, ethnic backgrounds, or their disabilities.		OSCE training	
3.5. Ensure confidentiality and privacy of patients' information.	- A34. D15. Avoid disclosing confidential patient information in online communications.	Know how Show how	Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	- A35. D16. Explain the potential abuses of technology-enabled communication and their relationship to professionalism.	Know how Show how	Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC



	- A36. D17 Follow relevant policies regarding the appropriate use of electronic medical Records	Know how Show how	Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
3.6. Recognize basics of medico-legal aspects of practice, malpractice and avoid common medical errors.	- A37. D18. Apply basics of medico legal practices in common clinical situations including: • Mentioned in A7. C15.	Know how Show how	Case Skill lab orbed side Mini - CEX training	Quizzes Formative written Final written Portfolio OSCE ACC
			OSCE training	
	- A38. D19. Demonstrate how to avoid common medical errors in the following common clinical situations: • Mentioned in A7. C15.	Know how Show how	Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC



3.7. Recognize and manage conflicts of interest.	- A39, C31, D20 Demonstrate the capacity to reflect on their own competencies and identify situations where one requires help	Know how	Case	Quizzes Formative written Final written
		Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC
3.7. Recognize and manage conflicts of interest.	- A40. C32 Demonstrate the capacity to identify situations where cognitive biases may have affected their patient management	Know how	Case	Quizzes Formative written Final written
		Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC
3.8. Refer patients to appropriate health facility at the appropriate stage.	A41 Describe the nature of clinical expertise and of its limits	Know how	Case	Quizzes Formative written Final written
	A42., C33 Recognize the range of possible transitions a patient may encounter (e.g., hospital to home, hospital to long term care facility, emergency department to ward in the	Know	Lecture	Quizzes Formative written Final written
		Know how	Case	
		Show how	Skill lab orbed side	Portfolio OSCE
	following clinical settingsexamples • Mentioned in A7. C15.		Mini - CEX training OSCE training	ACC
	- A43. List indications of admissionto hospital in the following clinical situations • Mentioned in A7. C15.	Know Know how	Lecture Case	Quizzes Formative written Final written



	A44. List criteria of home discharge in the following clinical situations Mentioned in A7. C15.	Know Know how	Lecture Case	Quizzes Formative written Final written
	- A45. List the elements of a high quality written “handover of care” Document in the following clinical settings examples Mention in C1	Know Know how	Lecture Case	Quizzes Formative written Final written
	- A46. D21. List the elements of a high-quality verbal and written handover of care in the following clinical settings examples Mention in C1	Know Know how Show how	Lecture Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
3.9. Identify and report any unprofessional and unethical behaviors or physical or mental conditions related to himself, colleagues or any other person that might jeopardize patients’ safety	- A47. D22. Participate in peer assessment	Know Know how Show how	Lecture Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
4.5 Identify various causes (genetic,	- A48.	Know	Lecture	Quizzes



developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of illness/disease and explain the ways in which they operate on the body (pathogenesis).	Identify various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of the following diseases mentioned in C1 C10, D3A7, C15	Know how	Case	Formative written Final written
5.2 Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.	- A49. D23. Demonstrate respect and cooperation with all health care providers in the following clinical settings mentioned in - C1 - C10, D3 - A7, C15	Know how Show how	Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
5.3 Implement strategies to promote understanding, manage differences, and resolve conflicts	-A50. Identify clinical scenarios that are likely to lead to conflict - A51. Describe the root causes of conflict in inter-professional teams - A52. Describe approaches to conflict resolution	Know how	Case	Quizzes Formative written Final written



in a manner that supports collaborative work.	- A53. D24. Recognize one's own approach to conflict - A54. , D25 Demonstrate the capacity to resolve conflicts that occur with colleagues related to	Know how Show how	Case Skill lab orbed side Mini - CEX training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
	issues such as prioritization of duties		OSCE training	
5.4 Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system.	- A55., D26 Identify aspects of their own leadership style(s) (including, strengths, weaknesses, and biases. - A56., D27. Participate in reflective processes to inform their personal leadership development. - A57., D28. Appreciate that leadership is not demonstrated only by leaders but that all physicians will be required to demonstrate "leadership" in the course of their careers. - A58., D29. Reflect on motivations, capabilities, skills, boundaries, and purpose as a leader. - A59., D30. Demonstrate teamwork and collaboration STYLES in the healthcare setting and participate in team-building and collaboration exercises.	Know how Show how	Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC



5.5 Communicate effectively using awritten health record, electronic medical record, orother digital technology.	- D31., C34. Communicate effectively with patients - D32. Communicate with colleagues - D33. C35. Communicate in breaking bad news - D34. Communicate with relatives - D35. Communicate with disabled people - D36.	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	Communicate in seeking informed consent - C36. , D37 Communicate in writing (including medical records) C37. D38. Communicate in dealing with Aggression			
5.6 Evaluate his/herwork and that of others using constructive feedback	D39. Consistently seek out and welcome feedback from others. - D40. Accept constructive feedback. D41., C38 Demonstrate the capacity to reflect upon feedback and use this as a basis for enhanced learning of relevant petencies. D42., C39. Provide constructive feedback to colleagues about aspects of their clinical competence when requested to do so.	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC



5.7 Recognize own personal and professional limits and seek help from colleagues and supervisors when necessary.	A60., C40. Shows how to refer to other professionals in the following clinical situations: Mentioned in C1 A61., C41. Shows how to seek further support and advice in the following clinical situations mentioned in A60. C40.	Know how Show how	Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
5.9 Use health informatics to improve the quality of patient care.	C42. Use information and communication technologies to enhance knowledge, skills and judgment in providing evidence-informed, safe,	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC
	effective and efficient patient care.			
	C43. Gather relevant data from a variety of sources, including literature, web-based resources, electronic health records and databases.	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC
	A71. C49. A62., C44. Critically assess the reliability, quality and comprehensiveness of all data used to inform health care Decisions.	Know how Show how	Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC



5.10 Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements.	- A63. C45. Write medical record in the following clinical situations mentioned in: • C1 • C10, D3 • A7, C15	Know how Show how	Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
5.12 Demonstrate accountability to patients, society, and the profession.	C46., D43. Reflect on examples from their clinical rotations and acknowledge that near misses, adverse events, and patient safety incidents (PSIs) will occur.	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC
6.1 Regularly reflect on and assess his/her performance using various performance indicators and information sources.	C47., D44. Reflect on experiences in the preclinical setting to identify areas requiring improvement a modify behavior. C48., D45. Reflect on experiences in the clinical setting to identify	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	areas requiring improvement and modify behavior by use of ethical frameworks. C49., D46. Evaluate teachers and programs in an honest, fair, and constructive manner.			
	A64. Use portfolio as a tool to develop and monitor a learning plan.	Know	lecture	Quizzes Formative written Final written



6.2 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice	C50., D47. Reflect on achievement of the required competencies. C51., D48. Use portfolio to improve self-awareness to enhance performance. D49. Demonstrate appropriate use and enhancement of resilience skills. C52, D50 Demonstrate the connection between self-care and patient safety.	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC
6.3 Identify opportunities and use various resources for learning.	C53 Use various resources of learning including LMS. C54., D51. Contribute to a positive atmosphere in the classroom and in clinical learning settings by demonstrating the following behaviors: - Participating enthusiastically as a learner - Providing encouragement to Colleagues	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC
	Refraining from belittling colleagues' efforts			



6.4 Engage in inter-professional activities and collaborative learning to continuously improve personal practice and contribute to collective improvements in practice.	A65. Identify the various different collaborators they will work within the clinical environment to provide patient care.	Know how	Case	Quizzes Formative written Final written
	A66., D52. Demonstrate a general understanding of the roles and responsibilities of collaborators in the clinical environment.	Know how Show how	Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	C55. Participate in inter-professional activities.	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC
6.6 Effectively manage learning time and resources and set priorities.	A67. Describe the concepts of the declared, taught, learned, and hidden Curriculum.	Know Know how	Lecture Case	Quizzes Formative written Final written
	A68. Describe factors that can positively or negatively affect the learning environment.	Know Know how	Lecture Case	Quizzes Formative written Final written
	A69., C56., D53 Develop a systematic approach to learning and a time management strategy.	Know Know howShow how	Lecture Case Skill lab orbed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC



	C57., D54. Access supports available to students to deal with stress and the health issues that are common in medical school.	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC
	A70. a Describe strategies for reporting and managing witnessed or Experienced mistreatment.	Know Know how	Lecture Case	Quizzes Formative written Final written
6.8 Critically appraise research studies and scientific papers in terms of integrity, reliability, and applicability.	C58. Select appropriate sources of knowledge as they relate to addressing focused questions. Identify appropriate sources that answer a clinical question.	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC
6.10 Summarize and present to professional and lay audiences the findings of relevant research and scholarly inquiry.	C59. D55 Plan and deliver an effective presentation.	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	C60., D56. Explain to patients and families in general terms the results of research studies and their application to clinical issues.	Show how	Skill lab orbed side Mini - CEX training OSCE training	Portfolio OSCE ACC

**4- Structure of the Course:-**

<i>Week</i>	Lectures (list number)	Practical (list number)	PORTFOLIO TASKS (NUMBER)	CASE BASED Discussions (NUMBER)	Formative Assessment (NUMBER)	Revisions and Exams	Total
1 st	1	1.5	2	1.5			
2 nd	1	1.5	2	1.5	1		
3 rd	1	1.5	2	1.5			
4 th	1	1.5	2	1.5	1		
5 th	1	1.5	2	1.5			
6 th	1	1.5	2	1.5	1		
7 th	1	1.5	2	1.5			
8 th	1	1.5	2	1.5	1		
9 th	1	1.5	2	1.5			
10 th	1	1.5	2	1.5	1		
11 th	1	1.5	2	1.5			
12 th	1	1.5	2	1.5	1		
13 th	1	1.5	2	1.5			
14 th	1	1.5	2	1.5	1		

As regard lecture, practical and case based discussion, Number = contact hours

**5- Course content:-****Lecture Topics and Their Intended Learning Outcomes
(Choose one source for each topic)**

Topics	Learning outcomes A	Lectures Titles	Specified reference (Kaplan Chapter)	Week	Date		Contact Hours
					from	to	
ABCs	A1-12, A14-25, A27, A29-70	Introduction to trauma in Orthopedics	SR-2	1 st			1
Orthopedic emergencies	A1-12, A14-25, A27, A29-70	- Compartment syndrome - Open fractures - Dislocations (shoulder, Hip, and elbow)	SR-2	2 nd			1
Upper Limb trauma	A1-12, A14-25, A27, A29-70	- Shoulder injuries / Fractures / - Arm Injuries / fractures - Elbow injuries / fractures / - Forearm injuries / fractures	SR-2	3 rd			1



Lower Limb trauma	A1-12, A14-25, A27, A29-70	- Femoral fractures (fracture neck of femur – trochanteric fractures – subtrochanteric fractures – Supracondylar fracture) - Tibial fractures (tibial plateau fracture)/ankle & foot fractures	SR-2	4 th and 5 th			2
Hip dislocation and pelvic fractures	A1-12, A14-25, A27, A29-70	- Hip dislocation - Pelvic fractures	SR-2	6 th			1
Traumatic spinal cord injuries	A1-12, A14-25, A27, A29-70	Traumatic spinal injuries and spinal cord injuries	SR-2	7 th			1
Low Back Pain	A1-12, A14-27, A29-70	Lumbar disc prolapse, Potts disease and related pathologies	SR-2	8 th			1
Sport Knee Injuries	A1-12, A14-25, A27, A29-70	- Meniscus injuries - Ligamentous	SR-2	9 th			1
Bone Infections	A1-25, A27-70	- Osteomyelitis – pyogenic arthritis - Pott's disease of the spine	SR-2 + Orthobullet website	10 th			1
Metabolic and degenerative arthritis	A1-12, A14-27, A29-70	- Osteoarthritis - Rheumatoid arthritis - Gouty arthritis	IM-2	11 th			1



Common Hand problems and Obstetric brachial plexus injury	A1-12, A14-25, A27, A29-70	• Carpal tunnel syndrome • Common tendon injuries • Associated pathology • Brachial plexus surgical anatomy • Obstetric brachial plexus injury	SR-2	12th			1
Bone tumors	A1-12, A14-25, A27, A29-70	• Benign bone tumors • Malignant bone tumors	SR-2	13th			1
Pediatric orthopedic conditions	A1-12, A14-25, A27, A29-70	• Congenital Talipes Equinovarus • Developmental Dislocated Hip • Septic hip • Knee deformity •	SR-2	14 th and 15 th			2

Skills and tasks and Their Intended Learning Outcomes

In addition to real patients and skills stated in the NARS should be learned either in practical or group discussion.

No.	Learning outcomes C and D	Bedside/skill lab sessions and titles	Weeks	Date		Hours
				from	To	



1.	C1-C13, C15, C16, C18-21. C23, C27, C29- C39, C41 - 60 D1-10,12-D56	History taking	1 st			1.5
2.	C1-C13, C15, C16, C21. C23, C29- 60 D1-21, 23 – 56	Knee examination	2 nd			1.5
3.	C1-C13, C15, C16, C21. C23, C29- 60 D1-21, 23 – 56	Spine examination	3 rd			1.5
4.	C1-C13, C15, C16, C21. C23, C29- 60 D1-21, 23 – 56	Peripheral nerve examination	4 th			1.5
5.	C1- C16, C21. C23, C29- 60 D1-21, 23 – 56	Hand tendon injuries	5 th			1.5
6.	C1- C13, C15-27, C29-60 D1-10,12-D56	Comment in plain x- rays of limbs fractures	6 th			1.5
7.	C1- C13, C15-27, C29-60 D1-10,12-D56	Comment in spine imaging Bone tumors imaging	7 th			1.5
8.	C1-C13, C15- 27, C28, C29- 60D1-10,12- D56	Pyogenic arthritis – osteomyelitis – Pott's disease	8 th			1.5



9.	C1- C13, C15-27, C29-60 D1-10,12-D56	CTEV DDH	9 th			1.5
10.	C1- C13, C15-27, C29-60 D1-10,12-D56	Bone healing – cast – splint – traction Principles of plate fixation	10 th			1.5
11.	C1- C13, C15-27, C29-60 D1-10,12-D56	Principles of Intramedullary nail and plates fixation	11 th			1.5
12.	C1- C13, C15-27, C29-60 D1-10,12-D56	Arthroplasty principles Orthopedic instruments	12 th			1.5
13.	C1- C13, C15-27, C29-60 D1-10,12-D56	Common clinical cases	13 th			1.5
14.	C1- C13, C15-27, C29-60 D1-10,12-D56	Common clinical cases	14 th			1.5
		Total				21

*Date is recorded in the timetable

Self-Directed Learning and Group Discussion (SDL & GD)

(Cases scenario with 10 MCQs) In addition to real patients

	Learning		Date*	Hours
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No.	outcomes (A and D)	Title of cases and reference	Weeks	from	to	
1.	A1-4, A6-7, A11, A14, A22- 27, A49 – A70 D1-65	ACL + MM Injury	1 st 2 nd			3
2.	A1-4, A6-7, A11, A14, A22- 27, A49 – A70 D1-65	Knee osteoarthritis + malalignment	3 rd 4 th			3
3.	A1-4, A6-7, A11, A14, A22- 27, A49 – A70 D1-65	Peripheral nerve injury	5 th 6 th			3
4.	A1-4, A6-7, A11, A14, A22-27, A49 – A70	Hand tendon injuries//Ilizarov device uses	7 th 8 th			3
5.	A1-4, A6-7, A11, A14, A22-27, A49 – A70 D1-65	Lumbar disc prolapse	9 th 10 th			3
6.	A1-4, A6-7, A11, A14, A22- 27, A49 – A70 D1-65	Bone and joint infection	11 th 12 th			3
7.	A1-4, A6-7, A11, A14, A22-27, A49 – A70 D1-65	CTEV + DDH	13 th 14 th			3
	Total					21

*Date is recorded in the timetable

**Portfolio**

No.	Week number	Task to be recorded in the portfolio	Quiz Case Based MCQs	Formative assessment
1.	1 st	- History taking - ACL + MM Injury	Answer the quiz of each lecture in this week (e-Learning).	
2.	2 nd	- Knee examination - ACL + MM Injury	Answer the quiz of each lecture in this week (e-learning).	Attend and pass the formative exam at the end of the week
3.	3 rd	- Spine examination - Knee osteoarthritis + malalignment	Answer the quiz of each lecture in this week (e-learning).	
4.	4 th	- Peripheral nerve examination - Knee osteoarthritis + malalignment	Answer the quiz of each lecture in this week (e-learning).	Attend and pass the formative exam at the end of the week
5.	5 th	- Hand tendon injuries - Peripheral nerve injury - Ilizarov device uses	Answer the quiz of each lecture in this week (e-learning).	
6.	6 th	- Comment in plain x-rays of limbs fractures - Peripheral nerve injury	Answer the quiz of each lecture in this week (e-learning).	Attend and pass the formative exam at the end of the week
7.	7 th	- Comment in spine imaging Bone tumors imaging - Hand tendon injuries	Answer the quiz of each lecture in this week (e-learning).	



8.	8 th	- Pyogenic arthritis – osteomyelitis – Pott's disease - Hand tendon injuries	Answer the quiz of each lecture in this week (e-learning).	Attend and pass the formative exam at the end of the week
9.	9 th	- CTEV DDH - Lumbar disc prolapse	Answer the quiz of each lecture in this week (e-learning).	
10.	10 th	- Bone healing – cast – splint – traction - Principles of plate fixation - Lumbar disc prolapse	Answer the quiz of each lecture in this week (e-learning).	Attend and pass the formative exam at the end of the week
11.	11 th	- Principles of Intramedullary nail and plates fixation - Bone and joint infection	Answer the quiz of each lecture in this week (e-learning).	
12.	12 th	- Arthroplasty principles - Orthopedic instruments Bone and joint infection	Answer the quiz of each lecture in this week (e-learning).	Attend and pass the formative exam at the end of the week
13.	13 th	- Common clinical cases - CTEV + DDH	Answer the quiz of each lecture in this week (e-learning).	
14.	14 th	- Common clinical cases - CTEV + DDH	Answer the quiz of each lecture in this week (e-learning).	Attend and pass the formative exam at the end of the week
	Total	28		

6- Teaching and learning methods:-

- 6.1 Lectures for knowledge outcomes:- Interactive face to face & online Lectures.
- 6.2 Practical (Bedside/skill lab) sessions to gain clinical skills.
- 6.3 Task based log (may use incision academy/clinical key cases).
- 6.4 Group discussions (Case – based).



7- Student assessment methods:-

I- Formative assessment:-

This is used to monitor student's learning to provide ongoing feedback that can be used by instructors to improve their teaching and by students to improve their learning.

It's given at least once in the form of quizzes that is made available for the students at the E-learning site at the end of the block.

Answers are presented instantly after the attempts and discussed on the students groups or in person with the teaching staff

Questions should be consistent with the level of the final exam. The student's attendance is a condition for entering the summative exams. The electronic or paper achievement file must be used to follow up on the students' evaluation, and its completion is a condition for entering the final exams

II- Summative assessment:-

It is used to evaluate student's achievements at the end of an instructional unit. The grades tell whether the student achieved the learning goal or not.

Blueprint

Lectures Titles	Week	Marks	
		End of block 22	Final 44
Introduction to trauma in Orthopedic	1 st	3	4
Compartmentsyndrome/ Open fractures Dislocations (shoulder, Hip, and elbow)	2 nd	3	
- Shoulder injuries / Fractures / - Arm Injuries /fractures - Elbow injuries /fractures / - Forearm injuries /fractures	3 rd	4	8
- Femoral fractures(fracture neck of femur - trochanteric fractures - subtrochanteric fractures - Supracondylar fracture) - Tibial fractures (tibial plateau fracture)/ankle & foot fractures	4 th and 5 th	6	

• Pelvic fractures • Ilizarov	6 th	3	2
Traumatic spinal injuries and spinal cord injuries	7 th	3	2



Lumbar disc prolapse, Potts disease and related pathologies	8 th	0	4
Knee injuries -Meniscus injuries Ligamentous	9th	0	4
Osteomyelitis – pyogenic arthritis	10th	0	4
Osteoarthritis Rheumatoid arthritis Gouty arthritis	11th	0	4
Carpal tunnel syndrome Common tendon injuries Brachial plexus surgical anatomy Obstetric brachial plexus injury	12th	0	4
Benign bone tumors Malignant bone tumors	13th	0	4
Congenital Talipes Equinovarus Developmental Dislocated Hip Septic hip Knee deformity Ilizarov	14th	0	4

**Weighting of assessments:-**

The student's performance will be assessed according to the following:-

Assessment task	Type of assessment	Proportion of total assessment	
		Percentage	Marks
End block exam	case based MCQ (single answer)	20%	22
Portfolio	Case presentation, May include incision academy certificates	10%	11
Final written exam	75 % MCQ (33 marks) 25 % Short answer and modified essay questions(11 marks)	40%	44
OSCE Final	Typical OSCE stations using standardized, real or skill lab encounters	30%	33
Total		100%	110

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Exam	Final (60%)	Practical (40%)	Total
<u>ORT-527</u>	66 Marks 75 % MCQ (50 marks) 25 % Short answer and modified essay questions (16 marks)	44 Marks	110 Marks

List of References:-

- 1- Course notes:-Lectures notes.
- 2- Essential books (text books):-
 - Kaplan USMLE (2019) Surgery.
 - Campbell's Operative Orthopedic.
 - Eltorai, A. E. M., Eberson, C. P., & Daniels, A. H. (2018). Essential Orthopedic

Review: Questions and Answers for Senior Medical Students. In Essential Orthopedic Review: Questions and Answers for Senior Medical Students. <https://doi.org/10.1007/978-3-319-78387-1>

3- Recommended books:-

- Case Competencies in Orthopaedics.
- Comprehensive Board Review in Orthopaedic Surgery.

4- Periodicals, Web sites, etc.

- British bone and joint Journal
- American bone and joint Journal
- Journal of Clinical Orthopedics



8- Facilities Required for Teaching and Learning:-

1. Lecture halls.
2. Medical Wards and clinical teaching rooms, operating theatres, outpatient clinics and casualty in emergency hospital.
3. Data show and PC with windows as an operating system and office.
4. Skill labs.
5. Software: Moodle and Microsoft teams.

9- Block evaluation:-

- Students' results.
- Students' feedback.
- Tutors' feedback.