

**For Candidates**

# **Master of Medicine (Orthopaedic Surgery) Examination**

## **Candidate Guide**

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The Master of Medicine (Orthopaedic Surgery) [MMed (Ortho Surg)] examination is designed to ascertain if the candidate has the pre-requisite basic knowledge to start practicing at a senior resident/registrar level in the wards, Specialist Outpatient Clinics and Operating Theaters both for elective and emergency conditions.

### Areas/Topics that will be assessed are: -

1. **Orthopaedic Investigations (Basic Modalities)** – Ability to read, identify salient abnormalities and interpret plain radiographs leading to a diagnosis and management of general conditions. Radiation protection & Radiological safety awareness.
2. **Orthopaedic Investigations (Advanced Modalities)** – Ability to read, identify salient abnormalities and interpret advanced tests such as ultrasound, MRI, DEXA, bone scans, PET scans, CT scans, angiograms, NCS and EMG leading to a diagnosis and management of general conditions. Clinical judgement and indications in ordering advanced imaging for conditions on an urgent/emergency basis and non-urgent elective basis.
3. **Orthopaedic Pathology (Trauma/Emergent Conditions)** – The diagnosis, knowledge and understanding of pathology and natural history of common Orthopaedic emergent or urgent conditions as may be encountered on call or in the outpatient clinic. Urgent, safe management of these conditions.
4. **Orthopaedic Pathology (Elective/Outpatient Conditions)** – The diagnosis, knowledge and understanding of pathology and natural history of common Orthopaedic elective or non-urgent conditions as may be encountered in the outpatient clinic. Standard management of these conditions.
5. **Orthopaedic Biomechanics** – The structure (gross and microscopic) of common tissues/organs encountered or used in Orthopaedic. An understanding of their healing as well as biomechanical properties in relation to the management of Orthopaedic conditions. Knowledge of how clinical management can affect healing/ reconstruction
6. **Orthopaedic Biomaterials** – Knowledge of materials commonly implanted in Orthopedics. Understanding of the relevant biological effects, mechanical/material properties of these materials in relation to their use.
7. **Orthopaedic Surgical Anatomy (Trauma/Emergent Conditions)** – Knowledge of applied anatomy for bones, joints, ligaments, and relevant neurovascular structures. Indications for use of and structures at risk in surgical approaches for urgent/emergent conditions.
8. **Orthopaedic Surgical Applied Anatomy (Elective/Outpatient Conditions)** – Knowledge of applied anatomy for bones, joints, ligaments, and relevant neurovascular structures. Indications for use of and structures at risk in surgical approaches for elective conditions.
9. **Orthopaedic Communication** – Counselling a patient with regards to surgical procedures and the ability to obtain informed consent. This includes explaining the procedure, its risks (including specific patient related), complications, benefits, and alternative procedures for the condition.
10. **Evidence Based Medicine** – To read and understand methodology and interpret results of published articles. Ability to classify the level of evidence and understand how this evidence applies to general orthopaedic practice. This is a written paper based on a selected article.

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Please refer to the MMed (Ortho Surg) Candidate Exam Topics for the suggested or sample topics for the examination.

### Examination Format

**Eight 10-minute VIVA stations.** Each station has a single examiner:

- 1) Orthopaedic Investigations – Basic Modalities
- 2) Orthopaedic Investigations – Advanced Modalities
- 3) Orthopaedic Pathology – Trauma/Emergent Conditions
- 4) Orthopaedic Pathology – Elective/Outpatient Conditions
- 5) Biological Tissues – Biomechanics
- 6) Biomaterials in Orthopaedics
- 7) Orthopaedic Surgical Applied Anatomy – Trauma/Emergent Conditions
- 8) Orthopaedic Surgical Applied Anatomy – Elective/Outpatient Conditions

**One 15-minute communication station** with a standardized patient and an examiner observing the exchange.

**One 40-minute written examination** to read a published research article and answer the questions. Each script is marked by two examiners independently.

### Passing Criteria

To pass the MMed (Ortho Surg) examination, candidates must complete all stations and achieve a minimum mark. A poor or borderline performance in 1-2 stations, with adequate performance in other sections to make up to the minimum passing mark will suffice to pass the examination. Candidates who are unsuccessful in more than 2 stations regardless of their total marks will be deemed to have failed the examination. Details of the scoring system are confidential.

Please note the following:

Candidates will only be informed whether they are successful in passing the examination or not. No marks will be provided to the candidates. This information will be provided in a letter. Unsuccessful candidates will be informed of the station(s) they were not successful in.

Appeals on the examination results will not be considered as the examination results are final.

The MMed (Ortho Surg) Committee reserves the right to modify the format of the examination at any time.

Current safety precautions (at the time of the examination) and restrictions as defined by the Ministry of Health (MOH) and the National University of Singapore (NUS) will apply. Any candidate denied entry to participate in the exam due to such safety regulations will not be eligible to take the exam and will have to apply for the next diet of the examination.

The exam conduct may be recorded for quality improvement in future examinations. Please inform the Division of Graduate Medical Studies (DGMS) should you object to being recorded. Otherwise, we will deem you have consented to being recorded. Recording will not be used for pass/fail purposes and will not be made available to candidates for any purposes including appeal.