



MGM INSTITUTE OF HEALTH SCIENCES

(Deemed University u/s 3 of UGC Act, 1956)

Grade 'A' Accredited by NAAC

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MGM 26 DIPLOMA IN ORTHOPAEDICS

Program Outcomes

PO1. A post graduate Diploma student having undergone the required training in the course should be able to recognize the health needs of the community.

PO2. The student should be competent to handle effectively medical problems and should be aware of the recent advances pertaining to her/his specialty.

PO3. The student should be a highly competent specialist with broad range of skills that will enable her/him to practice his/her speciality independently.

PO4. The PG student should also acquire the basic skills in teaching of medical/para-medical students.

PO5. She/he is also expected to know the principles of research methodology and modes of consulting library.

PO6. The student should attend conferences, workshops and CMEs regularly to upgrade her/ his knowledge.

Program Specific Outcomes

PSO1. Student should have fair knowledge of basic sciences (Anatomy, Physiology, Biochemistry, Microbiology, Pathology and Pharmacology) as applied to all specialities.

PSO2. The student should have sufficient knowledge of his subject including recent advances.

PSO3. The student should be fully conversant with the bedside procedures (diagnostic and therapeutic) and having knowledge of latest diagnostics and therapeutics available.

PSO4. Student should have acquired practical and procedural skills related to the subject.

PSO5. Critically evaluate, initiate investigation and clinically manage all the cases in his/her speciality

PSO6. Should plan and advise measures for the prevention and rehabilitation of patients with various pathological conditions.

PSO7. Able to ensure the implementation of National Health Programmes, particularly in the field of specialisation

Acquire training skills in research methodology, professionalism, attitude and communication skills, as below:

PSO8. Student must know basic concepts of research methodology, plan a research project, consult library and online resources, has basic knowledge of statistics and can evaluate published studies.

PSO9. Should be able to practice the specialty of choice ethically.

PSO10. Recognize the health needs of patients and carry out professional obligations in keeping with principles of National Health Policy and professional ethics.

Teaching skills in the subject

PSO11. Student should learn the basic methodology of teaching and develop competence in teaching medical/paramedical students.

PSO12. Should have acquired Problem Solving skills

Course outcome

At the end of the Diploma in Orthopaedics programme, the learner should be able to:

CO1. Demonstrate sufficient understanding of the basic sciences relevant to orthopaedic speciality through a problem based approach.

CO2. Describe the principles of injury, its mechanism, clinical presentation, plan and interpret the appropriate investigations, and institute the management of musculoskeletal injured patient.

CO3. Define and describe the pathophysiology of shock

CO4. Describe the principles and stages of bone and soft tissue healing

CO5. Understand and describe the metabolic, nutritional, endocrine, social impacts of trauma and critical illness.

CO6. Enumerate, classify and describe the various bony/soft tissue injuries affecting the axial and appendicular skeletal system in adults and children.

CO7. Describe the mechanism of homeostasis, fibrinolysis and methods to control haemorrhage.

CO8. Describe the coagulation cascade and its abnormalities.

CO9. Describe the pharmacokinetics and pharmacodynamics of drug metabolism, excretion of analgesics, anti-inflammatory, antibiotics, disease modifying agents and chemotherapeutic agents in bone and soft tissue tumours.

CO10. Describe the principles of internal and external fixation or stabilization of bone and joint injuries

CO11. Describe the clinical presentation, plan and interpret investigations, institute management and prevention of the following disease conditions a. Nutritional deficiency diseases affecting the bones and joints b. Deposition arthropathies c. Endocrine abnormalities of the musculoskeletal system d. Metabolic abnormalities of the musculoskeletal system e. Congenital anomalies of the musculoskeletal system f. Developmental skeletal disorder of the musculoskeletal system

CO12. Describe the pathogenesis, clinical features plan and interpret investigations and institute the management in adults and children in: a. Tubercular infections of bone and joints (musculoskeletal system) b. Pyogenic infections of musculoskeletal system c. Mycotic infections of musculoskeletal system d. Autoimmune disorders of the musculoskeletal system e. Rheumatoid arthropathy, Ankylosing spondylitis, seronegative arthropathy f. Osteoarthritis and spondylosis

CO13. Describe the pathogenesis, clinical presentation, plan and interpret investigations and institute appropriate treatment in the following conditions: a. Post polio residual paralysis b. Cerebral palsy c. Muscular dystrophies and myopathies d. Nerve Injuries e. Entrapment neuropathies

CO14. Understand the basics of research and biostatistics.

CO15. Describe the aetiopathogenesis, identify, plan and interpret investigation and institute the management of osteonecrosis of bones.

CO16. Identify situations requiring rehabilitation services and prescribe suitable orthotic and prosthetic appliances and act as a member of the team providing rehabilitation care

CO17. Identify and manage emergency situation in disorders of musculoskeletal system

CO18. Understanding the basics of diagnostic imaging in orthopaedics like:

- Plain x-ray
- Ultrasonography
- Computerised axial tomography
- Magnetic resonance imaging
- PET scan
- Radio-isotope bone scan
- Digital Subtraction Angiography (DSA)
- Dual energy x-ray Absorptiometry
- Arthrography

CO19. Describe the aetiopathogenesis, clinical presentation, Identification, Plan investigation and institute treatment for oncologic problems of musculoskeletal system both benign and malignancies, primary and secondary.

CO20. Describe social, economic, environmental, biological and emotional determinants of health in a given patient with a musculoskeletal problem.



Dr. Rajesh B. Goel
Registrar

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