SYLLABYS

I. COGNITIVE DOMAIN

At the end of the M.S. Orthopaedics programme, the post graduate student should be competent and show sufficient understanding of Basic Sciences as applicable to Orthopaedics and Trauma through a problem based approach.

1. Basic Sciences as related to Orthopaedics and Trauma

a) Embryogenesis of all organ systems
b) Structure and function of Central Nervous System
c) Structure and function of the peripheral Nervous System
d) Structure and function of the arterial and venous system
e) Structure and functions of the head & neck, abdomen, thorax and extremities.

2. Physiological basis and Pathophysiology in Health and Disease

a) Physical Growth
b) Temperature regulation
c) Acid Base Balance
d) Fluid Balance
e) Hematopoiesis
f) Hemostasis
g) Electrolyte balance
h) Bone mineralization: Calcium-Phosphate balance
i) Renal functions
j) Hepatic function
k) Respiratory functions
l) Cardiac functions
m) Gastrointestinal functions

n) Endocrine functions

o) Developmental Milestones

p) Nutritional Needs of Orthopaedic/Trauma Patients

q) Allergy

3. Clinical Microbiology as related to Orthopaedic infections

a) Virology

b) Bacteriology

c) Mycology

d) Parasitology (Protozoology and Helminthology)

e) Waste disposal, Sterilization, Disinfection

4. Clinical Pharmacology as related to Orthopaedics & Trauma

a) Pharmacokinetics – of common medications used in Orthopaedics & Trauma

b) Antimicrobials

c) Analgesia, Sedation

d) Drug Interactions

e) Adverse effects

f) Antidotes for Poisons

g) Drug induced disease

5. Professionalism and Ethics

a) Professionalism

b) Ethics

c) Medico legal essentials

6. Wound healing principles

a) Types of wounds

b) Stages of wound healing

c) Biochemical & Molecular factors in wound healing

d) Chemotherapeutic and other Pharmaceuticals in wound care

e) Host, Environment and agent factors

7. Bone Healing

a) Principles of bone healing

b) Biological bone healing

c) Factors influencing bone healing

d) Biomechanism of bone healing

MAPPING OF PROGRAMME OUTCOMES [POs] AND COURSEOUTCOMES [COs] OF PG PROGRAMMES

MS (SURGERY) PROGRAMME OUTCOMES

Sr. No	**By the end of the programme, the Medical Postgraduate Willhave**
PO 1	Knowledge and Skills
PO 2	Planning and problem solving abilities
PO 3	Communication
PO 4	Research Aptitude
PO 5	Professionalism and Ethics
PO 6	Leadership
PO 7	Societal Responsibilities
PO 8	Environment and Sustainability
PO 9	Lifelong Learner

SURGERY COURSE OUTCOME –
PGSUBJECT CODE –
01330301

Sr.No	By the end the Course, the student will be able to
1	Recognize the importance to the concerned surgery in the context of the health needs of the community and the national priorities inthe health section.
2	Practice the surgery concerned ethically and in step with the principles of primary health care.
3	Demonstrate sufficient understanding of the basic sciences relevant to the surgery specialty.
4	Identify social, economic, environmental, biological and emotional determinants of health in a given case, and take them into account while planning therapeutic, rehabilitative, preventive and primitive measure/strategies.
5	Diagnose and manage majority of the conditions in the surgery concerned on the basis of clinical assessment, and appropriately selected and conducted investigations.
6	Plan and advise measures for the prevention and rehabilitation of patients suffering from disease and disability related to the surgery specialty.
7	Demonstrate skills in documentation of individual case details as well as morbidity and mortality rate relevant to the assigned situation.
8	Demonstrate empathy and humane approach towards patients andtheir families and exhibit interpersonal behavior in accordance with the societal norms and expectations.
9	Play the assigned role in the implementation of national health programme, effectively and responsibly.
10	Organize and supervise the chosen/assigned health care services demonstrating adequate managerial skills in the clinic/hospital or the field situation
11	Develop skills as a self-directed learner, recognize continuing education needs; select and use appropriate learning resources
12	Demonstrate competence in basic concepts of research methodology and epidemiology and be able to critically analyze relevant published research literature**.**
13	Develop skills in using educational methods and techniques as applicable to the teaching of medical/nursing students, general physicians and paramedical health workers.
14	Function as an effective leader of a health team engaged in healthcare, research or training.

MS ORTHOPAEDICS PROGRAMME

Course Code	Course Title
01330301	MS Orthopaedics

CO No.	At the end of the course, the learner should be able to:	Mapped Programme Outcomes
CO 1	Recognize the importance of clinical Orthopaedics in the context of the health needs of the community and the national priorities in the health section.	PO1,PO2,PO3, PO4, PO5, PO6, PO7, PO8,PO9
CO 2	Practice clinical Orthopaedics ethically and in step with the principles. History taking & clinical examination of patientsattending orthopaedics OPD & admitted in wards.	PO1,PO2,PO3, PO4, PO5, PO6, PO7, PO8,PO9
CO 3	Demonstrate sufficient understanding ofthe basic sciences relevant to clinical Orthopaedics Approach to assess orthopedic cases History of orthopedics, Introduction of orthopedics , basic orthopaedic care	PO1,PO2,PO3, PO4, PO5, PO6, PO7, PO8,PO9
CO 4	Diagnose and manage majority of the conditions in clinical Orthopaedics on thebasis of clinical assessment, and appropriately selected and conducted investigations including prevention	PO1, PO2,PO3, PO4, PO5, PO6, PO7, PO8,PO9
CO 5	Demonstrate skills in Dressing, debridement & suturing of wounds.	PO1,PO2,PO3, PO4, PO5, PO6, PO7, PO8,PO9
CO 6	Demonstrate empathy and humane approach towards patients and their families and exhibit interpersonal behaviour in accordance with the societal norms and expectations	PO1,PO2,PO3, PO4, PO5, PO6, PO7, PO8,PO9
CO 7	Demonstrate skill in Application of various traction (skin/skeletal) Basic Plaster technique & removal of plaster cast.	PO1, PO2,PO3, PO4, PO5, PO6, PO7, PO8,PO9

CO No.	At the end of the course, the learner should be able to:	Mapped Programme Outcomes
CO 8	Develop skills in treatment of spine, hip replacement surgery & deformity correction etc.	PO1,PO2,PO3, PO4, PO5, PO6, PO7,PO8,PO9
CO 9	Demonstrate competence in basic concepts of research methodology and epidemiology and be able to critically analyze relevant published research literature in clinical orthopaedics .	PO1,PO2,PO3, PO4, PO5, PO6, PO7,PO8,PO9
CO 10	Develop skills in Trauma: Open Reduction & fracture fixation of upper extremity. Trauma :principles of Open Reduction & internal fixation of lower extremity	PO1,PO2,PO3, PO4, PO5, PO6, PO7,PO8,PO9
CO 11	Function as an effective leader of a health team engaged in Management of crush injury & compound fracture and emergency management of orthopedic cases	PO1,PO2,PO3, PO4, PO5, PO6, PO7,PO8,PO9