

All India Institute of Medical Sciences, Raipur
Postgraduate Course - M.S.
Curriculum
Subject: Orthopaedics

COURSE GOAL & OBJECTIVES

Major Goal:

Patient care Ability: A postgraduate in orthopaedics surgery at the end of its 3 year course should develop proper clinical acumen to interpret diagnostic results and correlate them with symptoms from history taking and become capable to diagnose the common clinical conditions/ disease in the specialty and to manage them effectively with success without making any serious complications and sincerely to take such accurate decision, for the patient's best interest including making a referral to consultation with a more experienced colleague/professional friend while dealing with any patient with a difficult condition.

Teaching ability: He/she also should be able to teach an MBBS student about the commonly encountered conditions in orthopaedics pertaining to their diagnostic features, basic pathophysiological aspect and the general and basic management strategies.

Research Ability: He/she should also acquire elementary knowledge about research methodology, including record-keeping methods, and be able to conduct a research inquiry including making a proper analysis and writing a report on its findings.

Team work: He/she should be capable to work as a team member. He/she should develop general humane approach to patient care with communicating ability with the patient's relatives especially in emergency situation such as in casualty department while dealing with cancer patients and victims of accident. He/she should also maintain human values with ethical consideration.

OBJECTIVES OF THE POST-GRADUATE COURSE

A postgraduate at the end of a 3-year P.G. degree course should acquire the following:

1. *Cognitive knowledge:* Describe embryology, applied anatomy, physiology, pathology, clinical features, diagnostic procedures and the therapeutics including preventive methods, (medical/surgical)

pertaining to musculo-skeletal system.

2. *Clinical decision making ability & management expertise:* Diagnose conditions from history taking, clinical evaluation and investigations and develop expertise to manage medically as well as surgically the commonly encountered, disorders and disease in different areas as follows:

(a) *Pediatric orthopaedics-* The student should be exposed to all aspects of congenital and developmental disorders such as CTEV (club-Foot), developmental dysplasia of hip, congenital deficiency of limbs, Perthe's disease and infections, and also to acquire adequate knowledge about the principles of management of these disorders.

(b) *Orthopaedic oncology-* The resident is expected to be familiar with the tumours encountered in orthopaedic practice. The recent trends towards limb salvage procedures and the advances in chemotherapy need to be familiar to him.

(c) *Management of Trauma-* Trauma in this country is one of the main causes of morbidity and mortality in our demographic statistics. The student is expected to be fully conversant with trauma in its entirety. In any type of posting after qualification the Orthopaedic surgeon would be exposed to all varieties of acute trauma. Hence, it is his responsibility to be able to recognize, assess and manage it including the medico legal aspects.

(d) *Sports Medicine-* A lot of importance is being given to sports medicine especially in view of the susceptibility of the athlete to injury and his failure to tide over them. Sports medicine not only encompasses diagnostic and therapeutic aspects of athletic injuries but also their prevention, training schedules of personnel & their selection.

(e) *Physical Medicine and Rehabilitation-* The student is expected to be familiar with this in all its aspects. Adequate exposure in the workshop manufacturing orthotics and prosthetics is mandatory, as is the assessment of the orthopedically handicapped.

(f) *Orthopedic Neurology-* The student should be exposed to all kinds of nerve injuries as regards their recognition & management. Cerebral palsy and acquired neurologic conditions such as post polio residual paralysis also need to be emphasized in their entirety.

(g) *Spine Surgery-* The student is expected to be familiar with various kinds of spinal disorders such as scoliosis, kypho-scoliosis, spinal trauma, PIVD, infections (tuberculosis and pyogenic), & tumours as regards their clinical presentations and management.

(h) *Basic sciences in Orthopaedics-* This deals with some of the fundamentals in orthopaedics such as the structure and function of bone cartilage etc., and their metabolic process. In addition the student learns about implants in orthopaedics and their metallurgy.

- (i) Radiology- Acquire knowledge about radiology/imaging and to interpret different radiological procedures and imaging in musculo-skeletal disorders. There should be collaboration with Radiology department for such activities.
- (j) *Psychologic and social aspect*- Some elementary knowledge in clinical Psychology and social, work management is to be acquired for management of patients, especially those terminally ill and disabled-persons and interacting with their relatives.
3. *Teaching*: Acquire ability to teach an MBBS student in simple and straightforward language about the common Orthopaedic ailment/disorders especially about their signs/symptoms for diagnosis with their general principles of therapy.
 4. *Research*: Develop ability to conduct a research enquiry on clinical materials available in Hospital and in the community.
 5. *Patient doctor relation*: Develop ability to communicate with the patient and his/her relatives pertaining to the disease condition, its severity and options available for the treatment/therapy.
 6. *Preventive Aspect*: Acquire knowledge about prevention of some conditions especially in children such as poliomyelitis, congenital deformities, cerebral palsy and common orthopaedic malignancies.
 7. *Identification of a special areas within the subject*: To further develop higher skills within the specialty in a specialized area such as Arthroplasty, Neurology, Arthroscopy, Oncology, Spine surgery, Hand surgery and Rheumatology, identify some area of interest during the residency and do fellowship/ senior residency programme in one of such areas.
 8. *Presentation of Seminar/paper*: Should develop public speaking ability and should be able to make presentation on disease-conditions/research topics to fellow colleagues in a Seminar/meeting/ conference using audiovisual aids.
 9. *Research writing*: Should be capable to write case-reports and research papers for publication in scientific journals.
 10. *Teamwork*: Team spirit in patient management, working together in OPD, OT, ward and sharing responsibility with colleagues such as doctor, nurses and other staff are essential. Resident has to develop these attributes through different mechanism of infection

PRACTICAL TRAINING:

A Junior Resident doctor, pursuing a P.G. Degree course is expected to

perform major and minor surgical procedures independently as well as under supervision of a faculty member/senior resident. She/he should be able to do many major procedures independently such as: (Few examples only given):

- Closed reduction of fractures
- External fixation of compound fractures
- Debridement of crush injuries
- Amputations
- Internal fixation of common simple fractures
- Polio and **reconstructive surgery** such as TA lengthening, Steindler's procedure etc.
- Intra-articular injections
- Steroid injections for various painful conditions
- Sequestrectomy in chronic osteomyelitis
- Corrective POP casts for club foot & other congenital deformities
- Biopsy from a mass

He/she should be able to do the following operations under supervision/guidance of senior colleagues/ faculty member (Few examples only given):

Internal fixation of simple fractures such as fracture of both bones of forearm, supracondylar fracture humerus, malleolus fractures, femur shaft fractures, per trochanteric fractures etc.

Polio **and other reconstructive surgery** such as Jone's procedure Campbell's procedure, Triple arthrodesis, Lambrinudi procedure etc.

Club foot surgery such as postero-medial soft tissue release, Dilwyn-ewan's procedure, triple arthrodesis, JESS fixator, Ilizoror fixator application.

Spastic Cerebral palsy such as fractional releases of gastrosoleus, hamstrings, rectus release and adductor tenotomies.

PERIOD OF TRAINING: 3 years

COURSE CONTENT:

Theory

Syllabus for individual papers:

Paper-I:

Basic Sciences:

Development of skeleton, histology of cartilage histology & histopathology of bone, physiology of fracture healing and delayed and non-union of bones, histology of skeletal muscle, collagen, physiology and mineralization of bone, physiology of cartilage, biophysical properties of bone and cartilage, metabolic bone disease and related dysfunction of parathyroid glands.

Paper-III:

Principles & Practice of orthopaedics:

Bone Infections (Pyogenic, Tuberculosis Syphilis, Mycotic infections, Salmonella & Brucellar osteomyelitis), Congenital deformities (upper & lower extremities, spine and general defects), Developmental conditions (osteogenesis imperfecta, dysplasias, hereditary multiple exostosis etc.) diseases of the joints (osteoarthritis, Rheumatoid arthritis, neuropathy joints, ankylosing spondylitis, sero-negative spondyloarthropathy, traumatic arthritis etc.) orthopaedic neurology, tumors of bone.

- Disease of muscle fibrin disease peripheral vascular diseases
- Disorders of hand & their management

***Paper-III:* Trauma surgery & Recent advances in orthopaedics**

- General principles of fracture management fractures of lower extremity, fractures of pelvis and hip, fractures of upper extremity and shoulder girdle, fractures and dislocations in children, malunited fractures, delayed union and non-union of fractures, acute dislocations, old unreduced dislocations, recurrent dislocations.
- Arthroscopy, LASER, Endoscopic minimally invasive spine surgery, allografts & bone banking Ilizarov & bone transport, chemotherapy of cancers.

Paper-//W: (General surgical Principles & orthopedic surgery) General surgery, oncology, and & Medicine as applicable to the musculo-skeletal disorders/disease. Radiology, Imaging – computed tomography and magnetic resonance imaging, (MRI) and interventional radiology and angiography as related to orthopaedics. General pathologic aspects such as wound healing and also pathology and pathogenesis of Orthopaedic disease, pharmacology, molecular biology, genetics, cytology, hematology, and immunology as applicable to orthopaedics. General principles of traumatology and also neck injury, Plastic surgery as applicable to orthopaedics.

Practical

(WARD/OT/OPD)– Spends 6 (six) months in orientation programme including exposure to casualty

- Learns bedside history taking in ward, OT exposures, casualty, ICU requirement and their visit to related disciplines such as physical medicine and rehabilitation/Anesthesia.
- – Care of indoor (medical; preoperative and postoperative) patients for a minimum period of 6 months and learn techniques of traction wound care and splintage.
- – Attends operation theatre and emergency operations for acclimatization.
- – Assists ward rounds and visits other wards with senior colleagues to attend call/consultations from other department.
- – Participates in the teaching sessions in ward for bedside clinical in the weekly afternoon seminar/ journal club.

After 6 months of orientation during 2 1/2 yrs:

- – Attends orthopaedics OPD 3 day a week
- OPD/ward – Discuss problematic cases with the consultant (s) in
- schedule – Attends operation room/theatre 3 days a week/ as per
- – Attend 2 morning rounds/ week / as per schedule
- – Care of the indoor patients on beds allotted to him/her.
- – Attends the weekly Journal Club and seminar and presents the same by rotation

- – Attends scoliosis, polio, hand, CTEV, arthritis clinics and presents cases participates in discussions including therapy-planning etc.
- – During the 2 1/2 years, the resident must attend the combined teachings
- – Programme of the department of surgery, Neurosurgery and Medicine i.e. clinical meetings, CPC's of students and staff of the whole hospital
- – Surgico-pathological conference in Pathology Department, with surgeons.
- – All kinds of specially prepared lectures by department. Faculty or from R.T./plastic or Neurosurgery Departments.
- – Visits by rotation the Rural Clinic for community exposures/work experience if any.
- – Does 24 hours-emergency duty once a week/ as per roster of the department.
- – Attends lectures by visiting faculty to the department/college from India/abroad.
- – Attends/participate/present papers in state/zonal national conferences.
- – Actively participate/help in organization of departmental workshop, courses in specialized areas like Arthroplasty, Arthroscopy, Spine, Hand surgery from time to time.

Research methodology / reporting on research Learns the basics in research methodology and make the thesis protocol with the 4 months of admission.

- Problem oriented record keeping including use of computer
- Use of medical literature search including through Internet use, in the library.
- Attends bio statistics classes by arrangement.
- Research Report – writing including preparation of Protocol for Research/Thesis.
- Writing an abstract/short paper/presentation style (slide-

making & audiovisual aids).

Humanity/Ethics:

– Lectures on humanity including personality development, team spirit and ethical issues in patient care and human relationship including, public relations, by Psychologist and public relation officers are to be arranged by the department/college.

Presentation for the Thesis work:

(a) Selection of thesis topic: Subject of thesis will be selected by the candidate under guidance of faculty, which will be approved by the departmental guide and other faculty. The candidate will be asked to submit the protocol within 4 (Four) month of admission after departmental faculty scrutinizes it. It is to be approved by the central thesis committee of the institute/college if such committee does exist, and the ethical considerations are also discussed in such Research Programme Committee.

(b) Once the thesis protocol is approved the candidate starts his research work under direct supervision of guide and co-guides.

(c) Three/six monthly progress of the thesis will be checked to know the outcomes/or difficulties faced by the candidate. Candidate will be asked to submit the thesis 6 months before the final exams. At the discretion of director/thesis committee one-month extension may be given to a candidate for submission of the protocol and the final thesis for any valid reason for the delay.

– Preparation of a report on a research project/Thesis.

METHODS OF TRAINING

The following learning methods are to be used for the teaching of the postgraduate students:

1. *Journal club*: 1 hours duration –Paper presentation/discussion – once per week (Afternoon).
2. *Seminar*: One seminar every week of one hour duration (Afternoon)
3. *Lecture/discussion*: Lectures on newer topics by faculty, in place of seminar/as per need.
4. Case presentation in the ward and the afternoon special clinics (such as scoliosis/Hand clinics). Resident will present a clinical case for discussion before a faculty and discussion made pertaining to its management and decision to be recorded in case files.
5. *Case Conference*- Residents one expected to work-up one long case and three short cases and present the same to a faculty member and

- discuss the management in its entirety on every Monday afternoon.
6. *X-Ray Classes*- Held twice weekly in morning in which the radiologic features of various problems are discussed.
 7. *Surgicopathological Conference*: Special emphasis is made on the surgical pathology and the radiological aspect of the case in the pathology department such exercises help the orthopaedics/ Pathology/Radiology Residents.
 8. *Combined Round/Grand Round*: These exercises are to be done for the hospital once/wk. or twice/ month involving presentation of usual or difficult patients. Presentations of cases in clinical combined Round and a clinical series/research data on clinical materials for benefit of all clinicians/Pathologists/ other related disciplines once in week or fortnightly in the Grand round.
 9. *Community camps*: For rural exposure and also for experiences in preventive aspect in rural situation/ hospital/school, patient care camps are to be arranged 2-3/ year, involving residents/junior faculty.
 10. *Emergency situation*: Casualty duty to be arranged by rotation among the PGs with a faculty cover daily by rotation.
 11. Afternoon clinics:

Back Ache Clinic including scoliosis:-Held once a week. Residents work up the cases of spinal deformity and present them to a faculty member and management plan recorded in case file.

Hand Clinic- Held once a week. All the cases of hand disorders are referred to the clinic and discussed in detail.

CTEV Clinic- Held once a week corrective casts are given and the technique learnt by the residents. Surgical management in also planned & recorded in case file.

Polio/ Cerebral Palsy and Paediatric Orthopaedic Clinic- Held once a week. All cases of lower limb deformities including PPRP, spastic cerebral palsy, Rickets etc are examined here. Various braces & Calipers are prescribed and surgical management planned.

12. Besides clinical training for patient care management and for bedside manners: Daily for 1/2 to one hour's during ward round with faculty and 1-2 hours in the evening by senior resident/faculty on emergency duty, bedside patient care discussions are to be made.
13. Clinical teaching: In OPD, ward rounds, emergency, ICU and the operation theatres: Residents/Senior Residents and Faculty on duty in respective places – make discussion on clinical diagnosis/surgical procedures/treatment modalities, including postoperative care and preparation of discharge slip.

14. Clinical interaction with physiotherapist: Clinical interaction with physiotherapist pertaining to management of the patients in post-op mobilization.
15. Research Methodology: Course and Lectures are to be arranged for the residents for language proficiency by humanity teachers besides few lectures on human values and ethical issues in patient care.
16. Writing Thesis: Thesis progress is presented once in 3 months and discussion made in the department. Guides/co- guides are to hear the problems of the candidate; can provide assistance to the student. Progress made or any failure of the candidate may be brought to the notice of college Dean/Principal.

MONITORING LEARNING PROGRESS

The residents have to maintain a log-book of their day to day work and learning. This has to be checked regularly by guide and weekly by the head of the department.

PERIODIC TESTS: Periodic appraisal classes and tests and quiz are also to be planned.

THESIS/DISSERTATION GUIDELINES:

Every candidate shall carry out work on an assigned research project under the guidance of a recognized post-graduate teacher, the results of which shall be written up and submitted in the form of a Thesis/Dissertation.

Work for writing the Thesis is aimed at contributing to the development of a spirit of enquiry, besides exposing the candidate to the techniques of research, critical analysis, statistical methods acquaintance with the latest advances in medical sciences and the manner of identifying and consulting available literature.

The topic of thesis and plan of work shall be submitted and presented by candidate before by research/scientific committee and Institutional Ethics Committee and can start the work after due approval from these bodies.

The dissertation should be written under the following headings:

- I. Introduction
- II. Aims or objectives of study
- III. Review of Literature
- IV. Material and Methods
- V. Results
- VI. Discussion
- VII. Bibliography
- VIII. Annexure

Four hard copies of dissertation/thesis along with soft copy on a CD thus prepared shall be submitted to the Sub Dean (Academics), six months before the commencement of final examination.

Candidate submitting thesis after the last date (as notified by the Academic Section) shall not be eligible to appear in ensuing the final examination. Thesis once rejected the candidate will have to appear after six months, after making necessary modification and resubmission.

To be eligible to be declared as successful in the PG Degree examination, it is compulsory for candidate to pass in all heads of the examination in the same attempt.

Thesis shall be examined by a minimum of 2 examiners (Three external) who shall not be examiners for theory and practicals. At least two examiners shall approve the same 3 Months before final examination otherwise candidate will lose his 6 months. The thesis will be blinded during evaluation so that it shall not contain anything, which can reveal the identity of the candidate.

GUIDE:

Professors, Additional professors and Teachers in a medical college/institution having a total of eight years teaching experience out of which at least five years teaching experience as lecturer or Assistant Professor gained after obtaining is considered as Post Graduate teachers and can guide the P.G. students.

A Co-guide with same qualifications may be included provided the work requires substantial contribution from a sister department or from another medical institution recognized for teaching/training by Medical Council of India. The Co guide shall be a recognized postgraduate teacher.

CHANGE OF GUIDE :

In the event of a registered guide leaving the college for any reason or in the event of death of guide, guide may be changed with prior permission from the University.

SCHEME OF EXAMINATION AND PASSING HEADS

- a) AIIMS shall conduct examination at the end of three academic years for M S Orthopaedics course for residents who have an aggregate of at least 80% attendance and satisfactory work record as judged by periodic appraisals and logbook. They should have passed in their Thesis /dissertation. AIIMS shall conduct not more than two examinations in a year, with an interval of not less than four and not more than six months between the two examinations.
- b) M.D. examination in the subject shall consist of thesis, theory papers and clinical/practical and oral examination.
- c) Approval of dissertation/thesis work is essential precondition for candidate to appear in final examination.
- d) Passing head and standard of Passing: -

There will be two heads of passing: -

- (i) Four papers of theory shall form one head of passing
- (ii) Clinical/Practical and oral taken together shall form the second head of Passing.
- (iii) A candidate must pass in both the heads that is the whole examination at one and in the same attempt. A candidate passing in one head and failing to pass in the other head will be declared fail and shall not be entitled to any exemption in the subsequent attempt.

e) To pass a candidate must obtain: -

- (i) Fifty percent of the total marks in theory examination (Total of all the four papers must be 50% of the total marks of theory). and
- (ii) Fifty percent of the total marks in clinical, oral and practical taken together.

- f) **Declaration of distinction:** A successful candidate passing the University examination in first attempt will be declared to have passed the examination with distinction, if the grand total aggregate marks is 75 percent and above. Distinction will not be awarded for candidates passing the examination in more than one attempt.

GUIDELINES FOR APPOINTMENT OF EXAMINERS FOR MD EXAMINATION:

- a) No person shall be appointed as an examiner in any subject unless he fulfills the minimum requirements for recognition as a post Graduate teacher as laid down by the Medical Council of India and has teaching experience of 8 (Eight) years as a Lecturer/Asst. Professor out of which he has not less than 5 (Five) Years teaching experience after obtaining Post Graduate degree. For external examiners, he should have minimum three years experience of examiner ship for Post Graduate diploma in the concerned subject. Out of internal examiners, one examiner shall be Professor and Head of Department or Head of Department.
- b) There shall be at least four examiners in each subject at an examination out of which at least 50% (Fifty percent) shall be external examiners. The external examiner who fulfils the condition laid down in clause – a) above shall ordinarily be invited from another recognized medical college, preferably from outside the State.
- c) An external examiner may be ordinarily appointed for not more than three years consecutively. Thereafter he may be reappointed after an interval of two years.
- d) The internal examiner in a subject shall not accept external examiner ship for a college from which external examiner is appointed in his subject.
- e) The same set of examiners shall ordinarily be responsible for the written, practical or part of examination.
- f) The Head of the department of the institution concerned shall ordinarily be one of the internal examiners and second internal examiner shall rotate after every two year.

SCHEME OF THEORY EXAMINATION (400 Marks)

Pattern of Question Paper for final M.S. examination

Q. No.	Nature of Questions	Division of Marks	Total Marks
1	Long Answer Type (2)	20 each	40
2	Short answer type(6)	10 each	60

Distribution of course in theory papers

Paper-I:

Basic Sciences:

Development of skeleton, histology of cartilage histology & histopathology of bone, physiology of fracture healing and delayed and non-union of bones, histology of skeletal muscle, collagen, physiology and mineralization of bone, physiology of cartilage, biophysical properties of bone and cartilage, metabolic bone disease and related dysfunction of parathyroid glands.

Paper-II:

Principles & Practice of orthopaedics:

Bone Infections (Pyogenic, tuberculosis syphilis, mycotic infections, salmonella & brucellar osteomyelitis), congenital deformities (upper & lower extremities, spine and general defects), developmental conditions (osteogenesis imperfecta, dysplasias, hereditary multiple exostosis etc.) diseases of the joints (osteoarthritis, Rheumatoid arthritis, neuropathy joints, ankylosing spondylitis, sero-negative spondyloarthropathy, traumatic arthritis etc.) orthopaedic neurology, tumors of bone.

- Disease of muscle fibrin disease peripheral vascular diseases
- Disorders of hand & their management

Paper-III: Trauma surgery & Recent advances in orthopaedics

- General principles of fracture management fractures of lower

extremity, fractures of pelvis and hip, fractures of upper extremity and shoulder girdle, fractures and dislocations in children, malunited fractures, delayed union and non-union of fractures, acute dislocations, old unreduced dislocations, recurrent dislocations.

- Arthroscopy, LASER, Endoscopic minimally invasive spine surgery, allografts & bone banking Ilizarov & bone transport, chemotherapy of cancers.

Paper-III: (General surgical Principles & orthopedic surgery) General surgery, oncology, and & Medicine as applicable to the musculo-skeletal disorders/disease. Radiology, Imaging – computed tomography and magnetic resonance imaging, (MRI) and interventional radiology and angiography as related to orthopaedics. General pathologic aspects such as wound healing and also pathology and pathogenesis of orthopaedic disease, pharmacology, molecular biology, genetics, cytology, haematology, and immunology as applicable to orthopaedics. General principles of traumatology and also neck injury, Plastic surgery as applicable to orthopaedics.

Examination pattern for practical examination (400 Marks)

Practicle exam consists of:

S. No.	ITEM	Total marks
1.	Long Case	80
2.	Short Case-1	40
3.	Short Case-2	40
4.	Short Case-3	40
5.	Instruments	20
6.	Surgical Procedure	20
7.	Specimen	20
8.	Bone	20
9.	Orthosis & Prosthesis	20
10.	Ward Round	20
11.	X-Ray	20
12.	Viva	20
13.	OSCE	20
14.	Log Book	20

Total 400 marks.

Book Name	Author Name	Principle of Reference	Publisher Name
------------------	--------------------	-------------------------------	-----------------------

Watoson Jones- Fractures And Joint Injuries	J.N. Wilson	Reference	Churchill Livingstone
Fractures, Dislocations and Sprains	Kay & Conwell	Reference	C.V. Mosby
Outlines of Fractures	Crawford Adams	Principle	Churchill Livingstone
Closed Treatment of Fractures	H.John Charnley	Principle	Churchill Livingstone
Outlines of Orthopaedics	Crawford Adams	Principle	Churchill Livingstone
Mercer's Orthopaedics Surgery	Duthie	Principle	Edward Arnold
Fundamentals of Orthopaedic Surgery	Philip Wiles	Reference	Churchill Livingstone
Paediatric Orthopaedic And Fractures	WJ Sherrad	Reference	Butterworth
Rockwood & Green's Fractures In adults	Charles M Court-Brown	Principle	Lippincott Williams
Rockwood & Green's Fractures in Children	John M Flynn	Principle	Lippincott Williams
Apley's system of orthopaedics and fractures	Louis Solomon	Principle	CRC Press
Clinical orthopaedic	Sureshwar pandey	Principle	jaypee

diagnosis			
Extbook of orthopaedics and traumatology	M V Natarajan	Principle	Wolter/Kluwer
Surgical exposures in orthopaedics	Stanley Hoppenfield	Principle	Wolter Kluwer
Traction and orthopaedic appliances	John D M Stewarts	Principle	Churchill Livingstone
Practical fracture treatment	Ronald McRae	Principle	Churchill Livingstone
Clinical orthopaedic examination	Ronald McRae	Principle	Churchill Livingstone
Green's Operative Hand Surgery	Wolfe , Hotchkiss	Reference	Churchill Livingstone/ Elsevier
Tachdjian's Pediatric Orthopaedics	John Herring	Reference	Elsevier
Master techniques in Orthopaedic surgery: Fractures	Donald Wiss	Reference	Lippincott Williams
Master techniques in Orthopaedic surgery: Sports Medicine	Fredde Fu	Reference	Lippincott Williams
Master techniques in Orthopaedic surgery: The shoulder	Edward V Craig	Reference	Lippincott Williams
Master techniques in Orthopaedic surgery: The Foot and ankle	Harold B Kitaoka	Reference	Lippincott Williams
CODT Continuing Orthopaedic		Reference	

Diagnosis and Treatment			
Master techniques in Orthopaedic surgery: Reconstructive knee surgery	Douglas W Jackson	Reference	Lippincott Williams
Master techniques in Orthopaedic surgery: Knee arthroplasty	Paul A Lotke	Reference	Lippincott Williams
Master techniques in Orthopaedic surgery: The elbow	Bernard F Morrey	Reference	Lippincott Williams
Master techniques in Orthopaedic surgery: The wrist	Richard H Gelbermann	Reference	Lippincott Williams
Master techniques in Orthopaedic surgery: The hand	Bernard F Morrey	Reference	Lippincott Williams
Master techniques in Orthopaedic surgery: Pediatrics	Vernon Tolo, David Skaggs	Reference	Lippincott Williams
Master techniques in Orthopaedic surgery: Soft tissue surgery	Steven L Moran	Reference	Lippincott Williams
Master techniques in Orthopaedic surgery: The spine	Thomas A Zdeblick	Reference	Lippincott Williams

Master techniques in Orthopaedic surgery: The hip	Daniel J Berry, Willian Maloney	Reference	Lippincott Williams
Master techniques in Orthopaedic surgery: Relevant surgical exposure	Morrey and Morrey	Reference	Lippincott Williams
Orthopaedic Diseases	Aegerter and Kirkpatrick	Reference	Saunders
Tumours and Tumourous Conditions of Bone and Joints	Jaffe	Reference	Lea Febiger
Campbell's Operative	A H Crenshaw	Principle	C V Mosby
Orthopaedics Extensive Exposure	A K Henry	Reference	Churchill Livingstone
Hand book of Physical Medicine	Kottae Krusen	Reference	Ellwood
Rehabilitation Medicine	Howard & Rusk	Reference	
Electrodiagnosis	Sidney Licht	Reference	
Kinesiology	Rach & Bruke	Reference	
The adult hip	John J Callaghan	Reference	Wolters Kluwer
Insall and scott surgery of the knee	WNorman ScottReference		Elsevier
The textbook of spinal surgery	Keith H Bridwell	Reference	Wolters Kluwer/Lippincott Williams
Minimal invasive spine surgery: a surgical manual	H M Mayer	Reference	Springer

Shoulder arthroscopy	Stephen J Snyder	Reference	Wolters Kluwer
Minimal invasive spine surgery: Advanced Surgical techniques	Kern singh, Alexander Vaccaro	Reference	Jaypee
Operative arthroscopy	Donald H Johnson	Reference	Wolters Kluwer
Turek's Orthopaedics Principles and Their Applications	Anil Kumar Jain	Principle	Wolter Kluwer
AO manual		Principle	AAOS
OKU 1 to 12		Reference	AAOS
Tuberculosis of the osteoarticular system	Dr S M Tuli	Principle	

Journals recommended for MD Course

1. Indian Journal of Orthopaedics.
2. Journal of Bone and Joint Surgery (British & American Volumes).
3. Orthopaedic Clinics of North America.
4. Clinical Orthopedics and Related Research
5. Yearbook of Orthopaedics.
6. British journal of Rheumatology
7. Physical Medicine. Journal of rehabilitation, Bombay.

CONTINUOUS EVALUATION OF DISSERTATION WORK BY GUIDE / CO-GUIDE

Name of the Student: _____

Name of the Faculty/Observer: _____

Date: _____

Sl. No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Periodic consultation with guide/co-guide					
2.	Regular collection of case material					
3.	Depth of analysis / discussion					
4.	Departmental presentation of findings					
5.	Quality of final output					
6.	Others					
	Total Score					

EVALUATION REPORT OF DISSERTATION/THESIS OF MD EXAMINATION

Roll No./ Code No. _____ Subject _____

Name of the Candidate (To be filled by office) : _____

Title of Dissertation : _____

THESIS EVALUATION CHART

Major Head	Criteria	Remark	
Title	Appropriateness.	YES	NO
	Clarity & brevity.	YES	NO
	Justification of the topic.	YES	NO
Introduction	Purpose of study.	YES	NO
	Mention of lacunae in current knowledge.	YES	NO
	Hypothesis, if any	YES	NO
Review of Literature	Relevance.	YES	NO
	Completeness.	YES	NO
	Is it current and up-to-date?	YES	NO
	Citation of reference is properly done or not?	YES	NO
Methods	Type of study mentioned	YES	NO
	Details of subjects. (I.e. cases) and controls.	YES	NO
	Details of materials (for e.g., apparatus used, laboratory tests, etc.) and experimental design.	YES	NO
	Procedure used for data collection is upto the mark	YES	NO
	Statistical methods employed, level of significance considered.	YES	NO
	Statement of limitations.	YES	NO
	Mention of ethical issues involved.	YES	NO
Observations and results	Logical organization in readily identifiable sections.	YES	NO
	Correctness of data analysis.	YES	NO
	Appropriate use of charts, tables, graphs, figures, etc.	YES	NO
	Statistical interpretation.	YES	NO
	Objectivity of interpretation	YES	NO
Discussion	Relevance (within framework of study) and appropriateness for data.	YES	NO
	Interpretation of implication of results.	YES	NO
	Statement of limitation of interpretation (Mention of appropriate caution while stating inferences).	YES	NO
	Mention of unanswered questions.	YES	NO
	Mention of questions raised.	YES	NO
	Summary and conclusions.	YES	NO
Annexure	Whether all required annexure and appendices are included, e.g. the clinical Proforma, the questionnaire used, etc.	YES	NO

RECOMMENDATION: (Please strikeout whichever is not applicable)

1. Adequate and acceptable
2. Acceptable subject to modifications/corrections & clarifications,
(Please mention reasons and mention sections to be revised before
resubmission)
3. Not acceptable for reasons stated bellow.

Reason for 2 or 3

.....

.....

.....

.....

.....

.....

Date:

Place:

Signature of the Examiner

Name :

Designation :

Address :

Contact Number :

E- mail :

All India Institute of Medical Sciences, Raipur**Department of Orthopaedics****M.S. Orthopaedics****LOG BOOK****Academic activities attended**

Name: _____ Admission Year: _____

Date	Type of Activity Specify Seminar, Journal Club, Presentation, UG teaching	Particulars

Academic presentations made by the student

Name: _____ Admission Year: _____

Date	Topic	Type of Presentation Specify Seminar, Journal Club, Presentation, UG teaching etc.

LOG BOOK
Practicals done by the candidate

Name: _____ Admission Year: _____

Date	Work Done	Remarks by teacher

POSTING SCHEDULE

S.NO.	DEPARTMENT/ SECTION	MONTH AND YEAR		Remarks	Signature of Section / Department In charge
		From	To		