



# अखिल भारतीय आयुर्विज्ञान संस्थान नागपुर

ALL INDIA INSTITUTE OF MEDICAL SCIENCES, NAGPUR

Department of Orthopaedics

## *Curriculum for Post-Doctoral Certificate Course (PDCC) in Joint Replacement & Adult Joint Reconstruction Surgery*

### **1. Introduction:**

The Post-Doctoral Certificate Course (PDCC) in Joint Replacement & Adult Joint Reconstruction Surgery, at the All India Institute of Medical Sciences (AIIMS) in Nagpur is aims to provide comprehensive training to Orthopaedic surgeons in the management of joint replacement surgeries thereby enhancing their knowledge, skills, and attitudes in this specialized field.

### **2. Goals and Objectives:**

**2.1. Goals:** Establish a comprehensive training program for Orthopaedic surgeons in the management of joint arthritis by joint replacement surgeries

#### **2.2. Objectives:**

- To train Orthopaedic surgeons in the evaluation, diagnosis and management of various conditions affecting joint, hip, knee leading to arthritis of joints.
- To develop surgical skills and techniques required for the performing different joint replacement & joint reconstruction surgeries.
- To foster a compassionate attitude and effective communication skills in dealing with parents and relatives of patients having Joint Arthritis
- To promote multidisciplinary collaboration and team management in the treatment of Joint Arthritis

### **3. Program Structure:**

**3.1. Eligibility Criteria:** Candidates applying for the course should have successfully completed MS/ DNB Orthopaedics from INI/NMC/NBE approved program.

**3.2. Duration:** The course program will have duration of one year.

**3.3. Number of candidates:** 01 seat per year.

**3.4. Mode of Selection-** Written exam (20 MCQ, 1 mark each) and Viva (10 Marks)

**3.5. Syllabus:** The syllabus will encompass essential knowledge, skills, and attitudes required for the management of Joint Arthritis.

#### **A. Knee**

- Biomechanics of knee
- Evolution and design of modern prosthesis
- Pre op evaluation, indication and contraindication of total knee replacement
- Assessment and results of total knee Arthroplasty

5. Various methods of TKR and techniques
6. Management of bone deficiency during TKR
7. TKR and specific problems
8. TKR in problem knee
9. Revision TKR
10. COMPLICATION OF total knee Arthroplasty and their management
11. Unicondylar knee replacement
12. Patello-femoral Arthroplasty
13. Alternative to TKA
  - Arthrodesis
  - Osteotomy
  - HTO
- B. Hip
  1. Biomechanics of the hip joint
  2. Selection of total hip replacement implants
  3. Pre-operative evaluation of a patient for THR including indications and contraindications
  4. Surgical approaches and techniques for THR
  5. Arthroplasty in septic hip disorders
  6. Complications of THR
  7. Revision THR
  8. Postoperative management
  9. Indication for hip preservation and technique
  10. Indication for hip fusion and conversion of Arthrodesis to hip Arthroplasty
  11. Alternative to hip arthroplasty
- C. Shoulder
  1. Study of biomechanics and anatomy of shoulder joint
  2. Indication and technique of Total Shoulder Arthroplasty
  3. Reverse Shoulder Arthroplasty
  4. Alternative to TSA
  5. Revision TSA
  6. Management of TSA
  7. Selection of total shoulder replacement implants
  8. Pre-operative evaluation of a patient for TSR including indications and contraindications
  9. Surgical approaches and techniques for TSR
  10. Arthroplasty in septic hip disorders
  11. Complications of TSR
  12. Postoperative management
  13. Indication and techniques for shoulder fusion
- D. Other joint Replacement surgeries – Elbow, Ankle, wrist etc.

Please note that the above curriculum provides an overview of the topics and skills covered in the PDCC program. The program may incorporate additional relevant subjects based on advancements in the field and the expertise of the faculty at AIIMS Nagpur.

### **3.6. Teaching/Learning Activities:**

The teaching/learning activities included in the PDCC in Joint Replacement & Adult Joint Reconstruction Surgery course are designed to provide a comprehensive educational experience for the trainees. These activities include:

SN	Name of activity	Frequency
1.	Didactic lectures	Once a month
2.	Seminar	Once a month
3.	Case presentations	Twice a month
4.	Journal review	Once a month

- **Teaching Activities:** Trainees will be encouraged to participate in teaching activities of postgraduates of orthopaedics to further enhance their teaching and communication skills. They may have opportunities to engage in teaching sessions for MBBS students and other healthcare professionals.
- **Research Project:** Each trainee will be required to develop and complete at least one research project during the course. This project can be either clinical or lab-based and should preferably result in a presentation or publication in a PubMed-indexed peer-reviewed journal. Trainees will receive guidance and supervision from experienced faculty members throughout the research process.
- **Publication and Presentation:** Trainees will be encouraged to publish their research findings and other academic work in peer-reviewed journals. They will also have opportunities to present their work at national and international conferences, symposiums, or other scientific forums to share knowledge and contribute to the field.

**3.7. Clinical Postings** During the PDCC course in Joint Replacement & Adult Joint Reconstruction Surgery at AIIMS Nagpur, the following clinical postings will be carried out to provide a comprehensive learning experience:

**Orthopaedic department – 11.5 months**

**Rotation posting- 15 days**

SN	Department	Learning objectives	Duration
1	Physical Medicine & Rehabilitation	<ul style="list-style-type: none"> <li>• To get acquainted with physiotherapy in conservative management of arthritis of joint.</li> <li>• To get acquainted to rehabilitation of patients after joint replacement surgeries.</li> </ul>	15 days

**4. Facilities and Resources:**

- AIIMS Nagpur have the necessary infrastructure, including well-equipped operating rooms, clinical facilities, imaging services, and access to relevant literature and resources.
- The department have dedicated faculty members who specialize in Joint Replacement & Adult Joint Reconstruction Surgery to oversee the training program and provide guidance to the trainees.

**5. Evaluation: Evaluation:**

To assess the progress of the candidate a formative assessment would be carried out to evaluate all three domains (knowledge, skills, and attitude) of the program at 6 months and a summative assessment will be done at 12 months for award of PDCC certificate.

Type of assessment	Timing	Theory	Practical Examination
Formative assessment	6 month	50 Marks ( 10 short notes of 5 mark each)	50 Marks Short case- 30 marks, Table viva – 20 Marks
Summative assessment	12 month	Total Marks- 100 2 Papers ( 50 marks each) Section A- MCQs (10 MCQ, 1 mark each, total 10 marks), Section B- Short answer questions (5 marks x 8= Total 40 Marks) Duration of paper- 2 hours each <ul style="list-style-type: none"> <li>• Paper 1-- Basic sciences, Biomechanics, Joint preserving surgeries</li> <li>• Paper 2—Joint Replacement Surgeries</li> </ul>	Total marks- 100 Clinical cases- 60 (Two cases of 30 marks each) Ward rounds – 10 OSCE- 10 Viva Voce- 20

**Eligibility criteria for summative assessment-**

- **Attendance more than 75 present.**
- **Minimum 35% marks in internal assessment.**
- **Submission of short research project.**
- **Satisfactory completion of logbook.**

**50% of the marks would be required in both theory and clinical/practical examination to declare the candidate pass and award the PDCC certificate.**

**6. Recommended books and journals:**

Books:

- 1) "The Adult Hip: Hip Arthroplasty Surgery" by John Callaghan
- 2) "Mastering Orthopedic Techniques: Total Hip Arthroplasty" By Rajesh Malhotra
- 3) "Illustrated Tips & Tricks in Hip & Knee Reconstruction" by Daniel J Berry
- 4) "Modern Techniques in Total Hip Arthroplasty: From Primary to Complex" by Ran Schwarzkop
- 5) "Revision Total Hip Arthroplasty" by James V. Bono
- 6) "Surgery of the Knee" By Insall & Scott
- 7) "Master Techniques in Orthopedic Surgery: Knee Arthroplasty" by Paul A Lotke
- 8) "Mastering Orthopedic Techniques: Total Knee Arthroplasty" By Rajesh Malhotra
- 9) "Total Knee Arthroplasty: A Technique Manual" by Richard D Scott
- 10) "Knee Arthroplasty: New & Future Directions" by Mrinal Sharma

Journals-

- 1) Journal of Arthroplasty, American Association of Hip & Knee Surgeons
- 2) Clinical Orthopaedics & Related Research, The Association of Bone & Joint Surgeons
- 3) Journal of Bone & Joint Surgery, Official journal of American Orthopedic Association
- 4) Indian Journal of Orthopaedics, Official Journal of Indian Orthopedic Association
- 5) Orthopedic Clinics Of North America, By Elsevier

# ALL INDIA INSTITUTE OF MEDICAL SCIENCES, NAGPUR

## DEPARTMENT OF ORTHOPAEDICS



### *Post-Doctoral Certificate Course (PDCC) in Joint Replacement & Adult Joint Reconstruction Surgery*

## LOGBOOK

\_\_\_\_\_ To \_\_\_\_\_  
(Day, Month, Year) (Day, Month, Year)

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

## GENERAL INSTRUCTIONS

1. This logbook will be part of the pre-requisite for appearing in final evaluation of PDCC.
2. The aim of this log book is to record and attest your training and experience as a PDCC student within the department of Orthopaedics.
3. The log book is helpful in providing a ready at hand data of all the clinical, operative and teaching experience which you gain during your stay in the department.
4. It is your duty to correctly fill in all the details of the log book and get the same attested by the concerned Consultant at regular intervals.
5. Signing of the log book has to be done by the Consultant. It is expected that every log book will be checked at least weekly on assigned days.
6. Besides the routine surgical experience, you are supposed to fill in the details of your departmental seminars given and attended, conferences/symposia attended, CME programs, tutorials and lectures given to PG/UG students and the Institutional clinical case meetings attended.
7. You should enter all cases attended/ presented at department academic meetings, at clinical rounds & in OPDs & emergencies.
8. While filling in the details for surgical experience you should mention the age and gender of the patient, the procedure name and date, whether the procedure was elective or emergency, your involvement (e.g. assisting (A), you as the surgeon (P), assisted by a trainer (PA)), and the outcome/any complication.
9. Log book is non-transferable and all information entered should not breach patient privacy.

**ALL INDIA INSTITUTE OF MEDICAL SCIENCES,  
NAGPUR**



***Post-Doctoral Certificate Course (PDCC) in  
Joint Replacement & Adult Joint Reconstruction Surgery***

**LOGBOOK CERTIFICATE**

Session : \_\_\_\_\_

Name : \_\_\_\_\_

**I certify that, this is a bonafide work done by the above candidate in  
the department of Orthopaedics, AIIMS, Nagpur during  
the *Post-Doctoral Certificate Course (PDCC) in  
Joint Replacement & Adult Joint Reconstruction Surgery***

Candidate signature

Faculty In-charge (PDCC)

Head,  
Dept. of Orthopaedics.  
AIIMS, Nagpur

# Format for Logbook

All India Institute of Medical Sciences,  
Nagpur

Department of Orthopaedics  
*Post-Doctoral Certificate Course (PDCC) in*  
*Joint Replacement & Adult Joint Reconstruction Surgery*  
**LOGBOOK**

## Academic Activities Attended

Name: \_\_\_\_\_

Admission Year: \_\_\_\_\_

S. No.	Date	Type of Activity: Case presentation, Seminar, Journal club Presentation, UG teaching	Particulars	Sign of Faculty I/C

## POSTING SCHEDULE including rotation postings.

S.NO	DEPARTMENT/ SECTION	MONTH AND YEAR		Remarks	Signature of HOD
		From	To		

### CASES SEEN IN OPD/IPD/EMERGENCY

S. No.	Date	OPD/IPD/ Emergency	Diagnosis	Management done	Signature of Faculty

### OPERATION THEATRE RECORD

S. No.	Date	Observed/Assisted/ Performed	Diagnosis	Surgery done	Anesthesia given	Signature of Faculty

### TEACHING ASSIGNMENTS

S. No.	Date	MBBS/MS students/Others	Topic	Sign of faculty

### POSTER/PAPER PRESENTATIONS

S. No.	Name of Conference	Venue	Paper/Poster	Date	Signature of Faculty

### ARTICLES PUBLISHED

S. No.	Authors List	Title of Article	Name of the journal	Type of Article	Year	Volume	Issue	Pagination	Signature of Faculty