

Post Doctoral Certificate Course in Developmental Pediatrics

PROGRAMME GOALS

1. Provide fellows with comprehensive knowledge and skills to become leaders in the field of developmental-behavioural pediatrics.
2. Establish expertise in transdisciplinary service and research.
3. Teach fellows to be responsive to cultural and linguistic differences, and the importance of patient and family-centered care.
4. Give fellows a solid grounding in public health knowledge and policy related to developmental-behavioural issues.
5. Develop fellows' advocacy skills on behalf of individuals and populations.
6. Enhance fellows' research skills and guide their scholarly activities.
7. Nurture habits of life-long learning and scientific inquiry.

PROGRAM OUTCOMES

A. COGNITIVE DOMAIN

The fellow should learn the Developmentally Right Care for the High Risk Newborn /Infants. He/She should be able to correctly identify advice assessments and plan comprehensive management for the neurodevelopmental disorders (NDD) in children.

B. AFFECTIVE DOMAIN:

The fellow should learn appropriate technique and do counselling technique for the parents of children with NDD. He/ She should be able to guide the behavior therapy techniques to children with NDD He/ She must spend time for case coordination work with parents, the multidisciplinary team, tertiary centers / super-speciality referral sources etc.

C. PSYCHOMOTOR DOMAIN:

The fellow student must devote time to observing and hands on for clinical therapeutic interventions and inter- disciplinary interventions, psychological assessments, etc. as per the posting. After the observation period is over he/she

must be able to perform independent assessments under the supervision of the guide/ resource faculty.

DURATION OF THE PROGRAM:

One year.

ELIGIBILITY

- MD/ DNB in Pediatrics.
- Application form as per format to be submitted before due date as advertised on website
- Entrance Exams for Selection:
 - 25 Marks MCQ Test based on subject concerned.
 - 25 MCQs of 1 mark each
 - No Negative Marking
 - Merit list will be displayed for eligibility
- Candidate will be subjected to the interview with the subject expert and HOD Pediatrics before qualifying for the course.
- In case of more than one candidate applying for the course the eligibility will be decided upon
 1. Screening test – written (50% weightage)
 2. Interview (50% weightage)

THEORY SYLLABUS:

Section 1. Spectrum of Developmental Disabilities (Definition, Theories of Normal Development and Behavior, Risk/Screening and Early identification, Developmental Surveillance and Screening)

Section 2. Diagnostic Processes (History and physical examination, Neurodevelopmental examination (age specific, standardized tools, value of serial evaluations, developmental curves, the 3 Ds: delay, dissociation and deviance)

Section 3. Neuro Developmental Disorders (Early Identification, Screening, Clinical Features, Diagnosis, Assessments)

Section 4. Child Development- Psychology (Principles, Stages and Theories of Development, Psychological, Social and Emotional Development, Development and Stages of Play

Section 5.

1. Autism Spectrum Disorders
2. Cerebral Palsy
3. Intellectual Disability
4. Specific Learning Disability

5. Attention Deficit Hyperactive Disorder
6. Hearing Impairment
7. Visual Impairment
8. Speech and Language Development and Disorders
9. High Risk Newborn Follow up Protocol
10. Newborn Hearing Screening Protocol
11. Neuro Developmental Assessment, Screening, Protocols and Tools
12. Neurological disorders
13. Behavior Disorders
14. Childhood Psychiatric Disorders
15. Medicolegal Issues in Developmental and Behavioral Pediatrics.

TEACHING LEARNING ACTIVITIES SCHEDULE:

1. Bedside clinical teaching: Daily
2. Bedside psychometric assessments: Daily
3. Seminar: Once in a month
4. Journal club: Once in 2 months
5. Case presentation: Once a month
6. Interdepartmental meet: Once in three months

TENTATIVE SCHEDULE FOR TRAINING:

- Student should report to the Head of the Department (HOD) of respective posting.
- The HOD should assign faculty who will supervise the work done by the fellow during the period of posting and also guide the fellow as per the defined objectives of the posting.
- At the end of each posting minimum number of logbook entries in line with the objectives as indicated below should be made by the fellow.
- The respective HOD and the assigned faculty should sign the logbook after verifying the entries done in the logbook.
- It will be mandatory for the fellow student to attend the Comprehensive Developmental Clinic (comprising of specialists from different departments under one roof) on the scheduled day and time irrespective of the place of the posting.

Sr. No.	Speciality	Department	Duration	Objectives of the posting	Minimum no. of logbook entries
1.	Autism clinic	Pediatrics	2 months	Correctly identify, do clinical and psychological assessments and plan management for children with autism. To provide guidance for home programme in occupational therapy & speech therapy for children with autism. Learn goal setting techniques.	20 patients
2.	Learning Disability clinic	Pediatrics	2 months	Able to do clinical and psychological assessments advice remedial education for children with Specific Learning Disability.	20 Patients
3.	Cerebral Palsy clinic	Pediatrics	2 months	Correctly diagnose, perform assessments and plan multidisciplinary management for children with cerebral palsy.	20 Patients
4.	High risk newborn follow up clinic	Pediatrics	1 month	Able to perform High risk newborn follow up as per the protocol. Do referrals and necessary assessments and provide guidance and counselling to the parents.	10 Patients
5.	Clinical psychology	Pediatrics	1 month	Able to carry out assessments for IQ/ DQ, ASD, ADHD, SLD and any other relevant assessments.	10 Patients
6.	PMR department	PMR Department	1 month	Able to carry out assessments for CP. To provide guidance for home programme in physiotherapy & occupational therapy for children with CP.	10 Patients
7.	Audiology and speech therapy	ENT Department	15 days	Observe procedures for audiological assessments. Learn to provide guidance for home programme in speech therapy.	5 patients

8.	Ophthalmology	Ophthalmology Department	15 days	Observe procedures for ophthalmological assessments, perform independent fundus examination. Learn to provide guidance for home programme in vision therapy. To learn common ophthalmological manifestations in NDD and neurological disorders.	5 patients
9.	Psychiatry	Psychiatry Department	15 days	Observe procedures for psychological assessments, perform independent mental status examination. Learn to provide guidance and counselling for psychological comorbidities in children with NDD. To learn psychopharmacology in NDD and neurological disorders.	5 patients
10.	Neurology	Neurology Department	15 days	Observe procedures for electrophysiological assessments (EMG, NCV, EEG, BERA, VEP). Learn basics of interpretation.	5 patients
11.	Elective posting		1 month	Fellow will be given an option to take one month additional posting mentioned in Sr. no 1 to 10 above. The objective of elective posting is to develop further expertise in the relevant field of the posting chosen by the candidate.	10 patients
	Total		12 months		

SHORT TERM RESEARCH PROJECT:

The short research study relevant to the subject of Developmental & Behavioral Pediatrics should be submitted by the candidate at the time of practical examination.

Schedule for the research work is as following:

- By end of first three months – Submission of the Protocol for approval to the Ethics Committee
- By end of next three months – There should be a mid -term presentation of the ongoing research work along with methodology, data collection and mode of analysis
- Results should be submitted to the Course Coordinator / Research Guide 3 months in advance of the final examinations.
- The research to be completed prior to the final examinations.

SIX MONTHLY PROGRESS REPORT:

- Six monthly progress report will be submitted to the academic section in the prescribed format, signed by the head of the department on 7th January and 7th July

ASSESSMENT METHODS:

(i) Formative Examination

One month prior to summative exam and pattern is as summative exam.

(ii) Summative Examination

Eligibility criteria for summative assessment

1. 40% Marks in formative exam separately in Theory & Practical.
2. 75% Attendance.
3. Satisfactory completion of short term research project.
4. Satisfactory six monthly progress reports.

Summative assessment format

- A written exam — 50 marks

Type of question	Number of questions	Marks
MCQs	20	20
LAQ	1	10
Short notes	4	4 * 5= 20
	Total	50

- Practical – 50 marks

Topic	Details	Time	Marks
Clinical case	1 Long case	40 min	25 marks
OSCE	OSCE stations will include 1. Spot diagnosis 2. Clinical case scenarios 3. Goal setting skills 4. Counselling skill assessment	15 min each	5 * 4 = 20 marks
Log book	Completed and signed by guide and HOD		5 marks
Total			30 marks

- **For certification the qualifying marks will be 50% marks separately in Theory & Practical in the Summative exam.**
- **Repeat Summative Exam in 45 Days after results.**

List of Books

1. Capute and Accardo's Neurodevelopmental Disabilities in Infancy and Childhood 4th Edition (2 volumes)
2. IAP Handbook of Developmental and Behavioral Pediatrics, 2021 Edition

3. American Academy of Pediatrics Developmental and Behavioral Pediatrics, 2nd edition, Authors Robert G. Voight, Michelle M. Macias, Scott M. Myers
4. Developmental-behavioral pediatrics: 5th edition, Authors William B. Carey MD (Author), Allen C. Crocker MD
5. Book on Developmental Pediatrics – Dr MKC Nair 2016, 2017
6. Introduction to Psychology by Morgan & King
7. Developmental Psychology by Elizabeth Hurlock.
8. The High Risk Newborn (Jaypee) 2008 MKC Nair
9. Developmental Disorders Early detection & Intervention. MKC Nair, Paul Russel, 2019
10. Illingworth's Book of The Development of the Infant and the Young Child Normal and Abnormal. MKC Nair, Paul Russell, 2013.

List of journals

1. Developmental Medicine & Child Neurology
2. Autism
3. Journal of Autism and Developmental Disorders
4. Autism Research
5. International Journal of Rehabilitation Research
6. Pediatric Clinics of North America
7. Journal of Developmental & Behavioral Pediatrics
8. Vulnerable children and youth studies