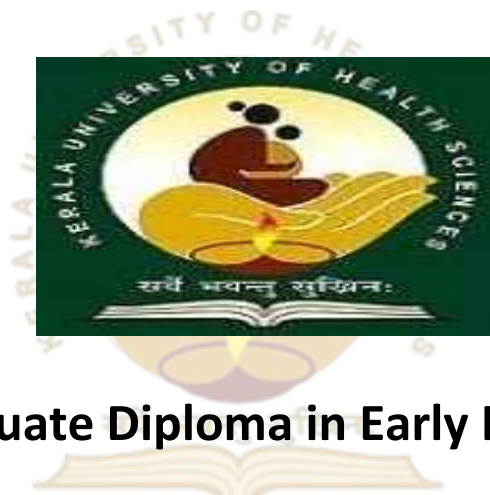


# **SYLLABUS**

**For Courses Affiliated to the  
Kerala University of Health Sciences  
Thrissur- 680596**



**Post Graduate Diploma in Early Intervention**

**[PGDEI]**

**Course Code : 585**

***(2024-25 Academic year onwards)***

## 2.COURSE CONTENT

### 2.1 Title of course:

Name of the course shall be the **Post Graduate Diploma in Early Intervention**

[PGDEI]

### 2.2 INTRODUCTION OF THE COURSE

The rapid advances in medical technology have successfully increased the survival of high risk babies but this adds on to number of babies who might end up with developmental delays and disabilities. Therefore, it is of utmost importance to focus on prevention aspects of disabilities. If a baby is born with or developing impairments or disability, there is a dire need to identify such infants with problems at the earliest and provide habilitation services and enhance the development and the quality of life. Such habilitation services early in life and development constitute the early intervention services.

The early intervention is at its infancy stage in our country with far too few and scattered centres providing these services. The major hurdle in the development of these services is lack of trained personnel. Hence to reach these services to the unreached the vital step will be human resource development.

India being a vast country, it is difficult to provide highly specialized services in the Community especially rural areas at the outset. Therefore, it is imperative to develop single window mode of delivery of services in the field of early intervention. Hence, this course focuses on preparing professionals qualified to intervene in this highly specialized field of early intervention with very young infants and toddlers.

### 2.2 OBJECTIVES

The training program is designed to prepare personnel to provide quality services to infants and toddlers who are disabled or at risk and their families. Students are prepared fulfill the role of

- An interventionist who delivers services to children and their families
- Function as program co-coordinator and supervisors in delivering services
- Operate effectively with in an inter agency, inter disciplinary team approach.

### OBJECTIVES

1. To equip personnel to assess, plan and implement early intervention to infants and toddlers who are at-risk and with developmental delays.
2. To develop competencies in organizing early intervention services.
3. To impart techniques of working with families and community for effective intervention.
4. To develop competency in report writing, record maintenance and communication.
5. To facilitate and integrate the children into community program and family guided intervention.

## 2.3 ON COMPLETION OF THE COURSE

The professionals have a scope of working in:

- Pediatric units of hospitals and pediatric clinics
- Child guidance clinics at risk follow up clinics
- Child development centre
- Rural and urban primary health centers in district health centers.
- Comprehensive rehabilitation centers
- Early intervention service centers like DEIC, REIC, MIU etc.
- Coordinators, in charge of early intervention centers, pre-school and nursery programs.

## 2.4 DURATION OF THE COURSE

One academic year

## 2.5 MEDIUM OF INSTRUCTION AND EXAMINATION

The medium of instruction and examination will be in English

## 2.6 CONTENT OF THE COURSE

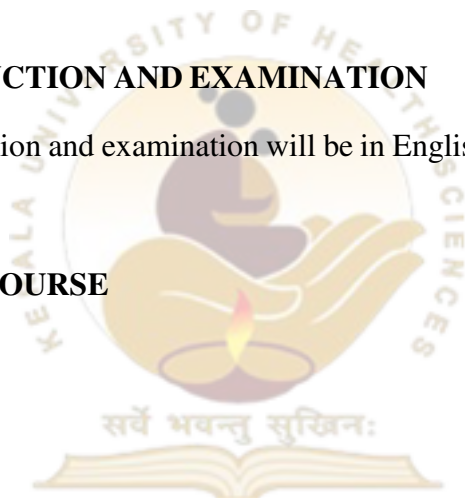
### 2.6.1 THOERY

PAPER	TITLE
I.	Neurobiology
II.	Child Development and Learning
III.	Physical and occupational therapy
IV.	Speech, language and communication
V.	Family and community



### 2.6.2 .PRACTICAL

- I. Case history and developmental assessments
- II. Therapeutics Assessment, Intervention and Evaluation
- III. Individualized Family Assessment
- IV. Individualized Early Intervention Program (IEIP)



## **Paper 1**

## **Neurobiology**

**No. of hrs: 100**

**No. of marks: 80**

### **Objectives:**

1. To understand the biological basis of developmental disabilities.
2. To identify the causes and risk factors, developmental disabilities and understanding their implication on development and their prevention aspects of disability.
3. To have knowledge the early indication of brain insults and characteristic features of developmental disabilities for early identification.

### **UNIT I-Anatomy, Physiology and embryology**

- Gross anatomy of Central nervous system (Frontal, Parietal, temporal, occipital, basal ganglia, cerebellum, midbrain, Pons, medulla oblongata, autonomic nervous system, limbic system, spinal cord, spinal arc, nervous system pathways), peripheral nervous system, autonomic nervous system.
- Micro anatomy-Cell structure, development and function
- Physiology- Neurons, synapses, transmission, Specific areas and functions-Frontal, Parietal, temporal, occipital, basal ganglia, cerebellum, midbrain, pons, medulla oblongata, autonomic nervous system, limbic system, spinal cord, spinal arc, nervous system pathways, and centers and pathways.
- Embryology-Stages of development.
- Maturation-Myelination, organization of brain, cortical sub cortical relay system

### **UNIT II-Special senses**

- Special senses-(Vision, hearing, vestibular, tactile, proprioceptive and kinesthetic) Development, function (anatomy, physiology), abnormalities, and early identification of sensory problem and basic principles of intervention.
- Processing of information (Sensory input, Filtration, organization, integration and adaptive response) -Sensory integration.

### **UNIT III-Health, growth and nutrition**

- Growth-Principles of growth, normal growth pattern, growth monitoring, factors influencing growth, hygiene and child health practices.
- Nutrition-Effect on growth, nutrients, feeding and weaning, balanced diet and nutritional deficiencies, Nutritional disorders.
- Childhood illnesses and diseases, newborn babies, medically fragile babies.

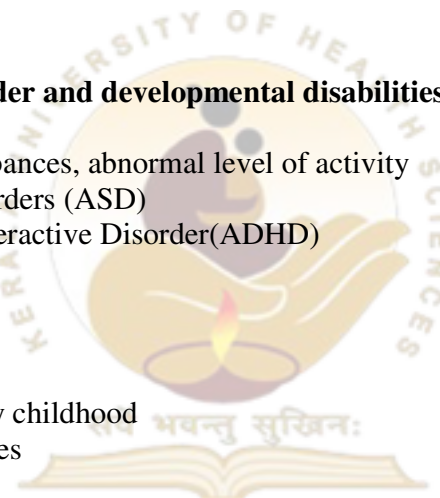
- Screening and investigative procedures-genetic, biochemical, imaging

#### **UNIT IV-Causes and prevention**

- Determinants of risk factors- preconception, prenatal, natal, postnatal, and psychosocial.
- Developmental abnormalities-Structural abnormalities, biochemical abnormalities and behavioral abnormalities.
- Primary, secondary, tertiary, prenatal, natal, postnatal prevention
- Genetic studies and genetic counseling.
- Family planning, guidance, and counseling.
- Immunization

#### **UNIT V-Neurological disorder and developmental disabilities**

- Epilepsy, sleep disturbances, abnormal level of activity
- Autism spectrum disorders (ASD)
- Attention Deficit Hyperactive Disorder(ADHD)
- Multiple handicaps
- Genetic syndromes
- Cerebral palsy
- Neural tube defects.
- Other diseases of early childhood
- Medically fragile babies



### **PAPER II: CHILD DEVELOPMENT**

**No. of hrs: 100**

**No. of marks: 80**

#### **OBJECTIVES:**

1. To equip with ability to apply theories of child development with emphasis on cognitive, motor, social, emotional and language development.
2. To understand a typical development and their implications on the development of the child.
3. To understand the influencing factors that affect child development.

#### **UNIT I: Growth and Development**

- Concept and definition of growth and development
- Principles and laws of development

- Developmental Milestones; Developmental Stages; Developmental Tasks;
- Domains of development: Motor, Cognitive, Language, Emotional and Social.
- Nature and Nurture in development
- Factors affecting development; Developmental hazards.
- Theories of development – Psychoanalytic theory, Ecological theory

## **Unit II: Sensory - Perceptual Development and Motor Development**

### **Sensory Perceptual Development**

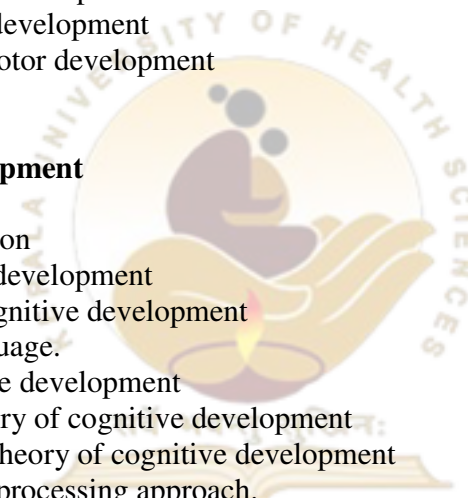
- Sensation, Perception
- Perceptual development
- Factors associated with Perceptual process
- Attention, Memory.

### **Motor Development**

- Principles of motor development.
- Sequence of motor development
- Characteristics of motor development
- Motor Skills
- Handedness

### **Unit III: Cognitive Development**

- Concept and definition
- Stages of cognitive development
- Factors affecting cognitive development
- Cognition and Language.
- Theories of cognitive development
  - Piaget's theory of cognitive development
  - Vygotsky's theory of cognitive development
  - Information processing approach.



## **Unit IV: Social and Emotional Development**

### **Social Development**

- Concept and meaning of social development
- Characteristics of Social Development
- Socialization

### **Emotional Development**

- Components of emotion
- Common emotional patterns
- Theories of emotional development
  - James Lange theory
  - Canon-Bard theory of emotional development
  - Emotional deprivation.

## **Unit V: Child Rearing Practices and Play**

- Concept of attachment and bonding
- Mother-infant interaction
- Influence of Family relationships on child development
- Sibling relationships
- Home environment
- Parental attitudes
- Child rearing practices
- Parenting styles – implications on normal and abnormal development.
- Play**
- Definition, Components of play, Types of play
- Stages of play
- Influence of play on child development

## **PAPER-III: PHYSICAL AND OCCUPATIONAL THERAPY**

**No. of hrs: 100**

**No. of marks: 80**

### **OBJECTIVES:-**

1. To acquire the ability to assess children's cognitive, social, emotional, communication, motor development.
2. To acquire the ability to select and use a variety of assessment instruments/tools and procedures.
3. To acquire ability to diagnose and communicate to parents and families.
4. To acquire ability to develop, implement and evaluate individualized Early Intervention program.

### **UNIT I: DEVELOPMENT**

- Normal development
- Abnormal development
- Normal postural control mechanism
- Balance
- Newborn reflexes

### **UNIT II: BASIC CONCEPTS**

- Role of occupational therapy and physical therapy in early intervention
- Tone, range of motion and muscle power -Voluntary and involuntary movements
- Biomechanics
- Brainstorming cerebral palsy
- Facilitation of normal movements
- Neuro developmental therapy

- Sensory integration, Rood's, PNF, Vojta therapy

### **UNIT III: ASSESSMENT**

- Assessment and formation of treatment goals
- Neuro developmental therapy assessment
- Sensory integration assessment

### **UNIT IV: COMMON INTERVENTION APPROACHES**

- Sensory integration treatment aspects
- Neurodevelopmental therapy treatment aspects
  
- Rood's, PNF, Vojta
- Hydrotherapy

### **UNIT V: INTERVENTION**

- Specific conditions and its treatment techniques
- Spina bifida, muscular dystrophy, Poliomyelitis, Erb's palsy, CDH, CTEV,
- Torticollis, Cerebral palsy, Intellectual disability and behavioral problems.
- Intervention for multiple disability
- Aids and appliances
- ADL

### **PAPER IV: SPEECH LANGUAGE AND COMMUNICATION**

**No. of hrs: 100**

**No. of marks: 80**

#### **OBJECTIVES:**

1. To acquire the ability to assess children's speech language and communication development.
2. To acquire the ability to select and use a variety of instruments/tools and procedures to assess speech and language.
3. To acquire ability to access and communicate assessment results to parents and families.
4. To acquire ability to develop implement and evaluate individualized intervention program.
5. To acquire competency to organize intervention programs and identification of appliances \ assistive devices.

#### **UNIT: 1 BASIC TERMS AND CONCEPTS (16 hours)**

- Fundamental terms and concepts like communication language and speech etc.
- Components of language.

- Speech production:-Introduction to anatomy and physiology of speech production mechanism.

#### **UNIT: 2 SPEECH LANGUAGE DEVELOPMENT (16 hours)**

- Acquisition of speech and language by normal children.
- Pre-requisites for normal speech and language development.
- Stages of speech language development from birth.
- Development of components of speech and language.

#### **UNIT: 3 COMMUNICATION DISORDER (16 hours)**

- Nature and causes of speech, language and communication problem in young children.
- Prevalence and incidence of speech language problems.
- Range of communication problems.
- Classification of speech and language disorders.

#### **UNIT: 4 ASSESSMENT AND EVALUATION (12 hours)**

- Introduction to speech and language assessment- Definition, purposes, methods of collecting data.
- Introduction to assessment tools used in early intervention, selection of assessment tools.
- Informal and formal speech and language assessment tools/instruments.
- Family centered assessment-involving families as active participants in assessment program.
- Administering and communicating assessment results.
- Definition of evaluation, difference between assessment and evaluation.

#### **UNIT: 5 INTERVENTIONS. INDIVIDUALISED EARLY INTERVENTION PROGRAM (20 hours)**

- Linking assessment with intervention process.
- General techniques/ strategies of speech and language training.
- Development and implementation of the individualized early intervention program.
- Planning and developing short term and long term goals for speech and language training according to the assessment results.
- Program monitoring, summarizing and evaluating the acquisition of child and family outcomes.
- General guidance to parents and care for speech disorders, referrals to speech language pathologists.
- Alternative and augmentative communication systems.

**PAPER V:**

**FAMILY AND COMMUNITY**

**No. of hrs: 100**

**No. of marks: 80**

**OBJECTIVES:-**

1. To understand family systems, dynamics, roles and relationships within family and community.
2. To assist families to identify their resources, priorities and concerns in relation to child's development.
3. To acquire competency to evaluate services to the families.
4. To acquire ability to design process and strategies that for family intervention.

**Unit I - Family and the child**

- Definition, importance and types of families
- Lifecycle of a family, family dynamics, family hierarchy and role expectations.
- Family needs and family coping and adaptive mechanism.
- Family centered early intervention practice
- Tradition, culture and the communication patterns within a family
- Family systems, functioning, support, resources, strengths and needs.
- Effect of all these on the child
- Effect of a disabled child on the family
- Coping and adaptive mechanisms of families

**Unit II - Parents and the child**

- Impact of a child with developmental delays on the parents and family
- Parent attitudes, reactions, interactions, self esteem, parental stress and depression
- Parent training program, parent-to-parent support program.
- Parental reaction, grief, acceptance, and adaptation process.
- Stress, burnout, mental health concern, and caregivers well being.
- Sibling perspective and sibling support.
- Coping strategies and positive adaptation, positive parenting

**Unit III: Counseling**

- Basic counseling skills for early intervention professionals.
- Case work - Definition and principles, individual counseling.
- Case work in early intervention- assessment, goal setting, intervention planning, and follow up.
- Individual and family counseling principles and ethical consideration

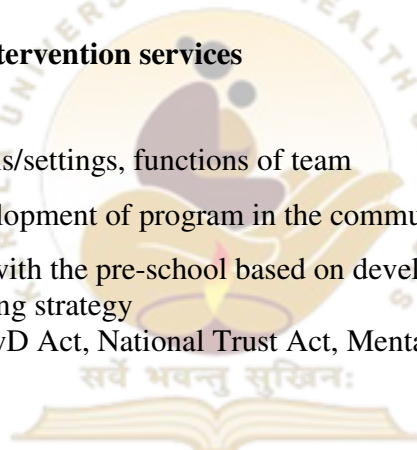
- Family therapy - Definition, principles, methods of counseling
- Marital counseling - methods of counseling
- Brief counseling models Solution focused, strength based, supportive counseling.
- Breaking the bad news

#### **Unit IV: Community**

- Community concept and role played in the field of disability and early childhood intervention.
- Stigma, inclusion and social participation.
- Community culture, values and attitudes and their effects on the child, parents and families
- Community awareness, resources, community organization
- Group work - definition, principles, types of groups, group dynamics

#### **Unit V - Organizing early intervention services**

- Schemes and benefits
- Service delivery models/settings, functions of team
- Organization and development of program in the community
- Establishing linkages with the pre-school based on developmental and learning experiences and teaching strategy
- Acts and policies- RPwD Act, National Trust Act, Mental health care Act



### **PRACTICALS**

#### **PAPER 1: CASE HISTORY TAKING AND DEVELOPMENTAL ASSESSMENT**

Objectives:- At the end of the year the student is expected to

- Take case history in an infant and toddler
- Assess using developmental scale and to communicate the assessment results to parents and family.

#### **Procedure:**

- Detailed case history of children below 3 years in 3 cases. ] Records will be submitted
- Developmental assessment in 2 cases in the age range of 0-3 years for final examination

## CONDUCT OF THE EXAMINATION

Duration: 9 am to 5 pm

**Total marks: 60**

The examination will be for the whole day. The students will have 3 hours of working with the case followed by viva.

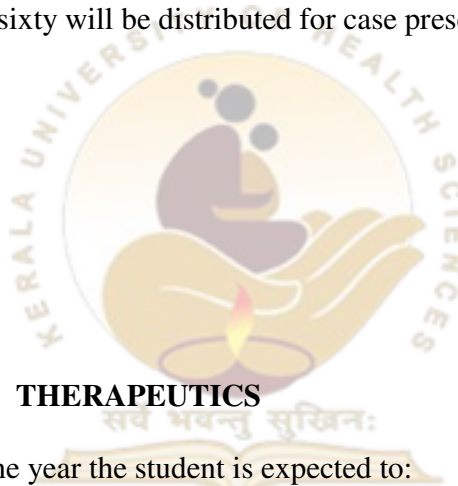
Each student will be given a case to write detailed case history and conduct developmental assessment.

After completing the case history and developmental assessment, the student is expected to write the report and present the case to the examiners.

Viva follows.

**Question:** Write the case history and conduct developmental assessment and report for the given child.

**Evaluation:** Total marks of sixty will be distributed for case presentation, viva and record submission.



## PAPER II: THERAPEUTICS

**Objectives:-** At the end of the year the student is expected to:

- Assess and plan an appropriate in the areas of physiotherapy, occupational therapy, speech language and communication.
- Evaluate the outcome of intervention and submit the report.

**Procedure:-**

- students will be given orientation on assessment in all therapies (PT, OT, ST)
- Students will assess infants and toddlers under supervision and plan for remediation program.
- At the end of practical the students will make submissions of 6 case records
- 2 cases for physiotherapy
- 2 cases for occupational therapy
- 2 cases for speech, language and communication.

**Records will be submitted for final examination**

## **CONDUCT OF THE EXAMINATION**

The examination will be for the whole day.

The students will have 3 hours of working with the case followed by viva.

Each student will be allotted a child for comprehensive assessment (OT, PT, and ST).

After completing the assessment, the student is expected to write the intervention plan and present the case to the examiners. Viva follows.

**Question:** Conduct a comprehensive assessment (OT, PT, and ST) of the given child, identify the areas for intervention and write the management plan.

**Evaluation:** The examiners can distribute the total marks of sixty for case presentation, viva and record submission

## **PAPER III: INDIVIDUALISED FAMILY ASSESSMENT & INTERVENTION**

**Objectives:-** At the end of the year the student is expected to:

- Assess the families of infants and toddlers using family assessment checklist.
- Plan family intervention program

**Procedure:-**

- The students are expected to make home visits and assess individual families
- Submit the assessment report with planning the intervention program of 2 cases of infants and toddlers

## **CONDUCT OF EXAMINATION**

### **Description of the practical carried out during the academic year**

During the year each student is expected to work with two cases.

The student assesses each rising family intervention scales to identify the areas required for counseling.

After identification intervention program is planned and implemented and evaluated. The progress is recorded.

### **Conduct of the examination:**

The examination will be for the whole day.

The students will have 3 hours of working the case and then a viva will be conducted. Each student will be given a case for conducting family assessment. After completing the assessment, the student is expected to write the report and present to the examiner with plan of action.

**Question:** Conduct the assessment of the given case using family assessment scales, write the report, identify the areas for intervention and specify the strategies.

**Evaluation:**

The examiner can distribute the total marks sixty as per the practical work covered by the student.

## **PAPER IV: INDIVIDUALISED EARLY INTERVENTION PROGRAMME (IEIP)**

**Objectives:** - At the end of the year the student is expected to:

- Carry out comprehensive assessment of the child and family and write the assessment reports
- Plan and implement individualized early intervention program.
- Evaluation of the IEIP

**Procedure:**

- Comprehensive assessment of child and family
- Writing the assessment report and communicating assessment results to the family
- Planning and implementing IEIP
- Evaluating IEIP and documenting the results and presentation of cases.
- Submission of records of 4 cases.

## **CONDUCT OF EXAMINATION**

### **DESCRIPTION OF THE PRACTICALS**

During the year each student is expected to work with four (4) cases on a longitudinal basis. The student assesses each case for identifying medical needs, therapeutic needs, cognitive, language, communication needs and family intervention.

Based on the assessment information each student develops an individualized early intervention program (IEIP), implements it and evaluates the progress of the child.

At the end the student submits a comprehensive report of all 4 cases for the examination purpose.

### **CONDUCT OF THE EXAMINATION**

The examination is mainly conducted in the form of viva wherein the external examiners will go through their IEIPs and examine the student on the different types of assessment and intervention conducted by the students.

### **EVALUATION**

The examiner can distribute the total marks sixty as per the practical work covered by the student

## Scheme of Examination:

### Theory

Group	Paper	Duration(hours)	Max. Marks	Marks	
				Written Exam	Internal Assessment
Paper I	Neurobiology	3	80	60	20
Paper II	Child development	3	80	60	20
Paper III	Physical and occupational therapy	3	80	60	20
Paper IV	Speech, language and communication	3	80	60	20
Paper V	Family and community	3	80	60	20
		Total	400	300	100

Internal assessment: total 20 marks

First internal examination: 10 marks

Second internal examination: 10 marks

### Practical / Viva

Group	Paper	Duration (Hours)	Max. Marks	Marks	
				Written Exam	Internal Assessment
Paper I	Case history taking	3	150	60	90
Paper II	Therapeutics	3	150	60	90
Paper III	Individualized Early Intervention Program	3	150	60	90
Paper IV	Family intervention		150	60	90
		Total	600	240	360

First internal examination: 45 marks

Second internal examination: 45 marks

Total 90 marks