



Course contents

I. Introduction to Advance techniques in Oncopathology.

- a. Introduction to training program.
- b. General principles in practice of Oncopathology.
- c. DNA and RNA structure.
- d. Gene expression.
- e. Mutation.

II. Molecular Genetics.

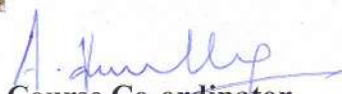
- a) Human genetics, an introduction.
- b) Terminology, classification and nomenclature of human Chromosomes.
- c) Introduction to Advanced techniques.

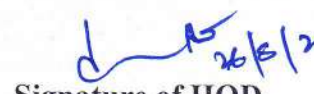
III. Polymerase Chain Reaction.

- a) Types and applications of PCR.
- b) Basic steps in PCR.
- c) Components of PCR, reverse transcription PCR, and PCR product analysis.
- d) Recognize the characteristics of real-time PCR.
- e) Designing of primers and probes
- f) Applications.
- g) Good PCR laboratory practice: How to avoid contamination
- h) Practical Demonstration.

IV. Gel Electrophoresis.

- a. Protocol for running the gel.
- b. Isolating / Purifying DNA.
- c. Titering phage.
- d. Applications.
- e. Practical Demonstration.


Course Co-ordinator
Professor
Department of Pathology
RRMCH, Bangalore


Signature of HOD
Prof & HOD
Department of Pathology
RRMCH, Bangalore



DEPARTMENT OF PATHOLOGY

Sr.No	Details	
1	Name of the Value Added Course	"ADVANCE TECHNIQUES IN ONCOPATHOLOGY"
2	Objective/Need	<ol style="list-style-type: none"> 1. To train students with the aim to familiarize them with advance techniques in oncopathology and enable them to provide comprehensive diagnosis. 2. To provide a working knowledge of molecular genetics, and the importance of chromosomal variations in structure and number in oncopathology. 3. To facilitate postgraduate students in Pathology and other medical subjects desiring to pursue the field of cytogenetics in practice.
3	Course content	File attached value added course contents 2021.docx
4	Duration-	16 hours
5	Frequency	Once a year
6	Eligibility	Postgraduate students enrolled for Master degree in pathology and other medical subjects.
7	Teaching Methods	Interactive Lectures, Hands on techniques in PCR and Gel Electrophoresis.
8	Target group	Course is open for postgraduate students in pathology and other medical subjects.
8	Certification	Yes
9	Feedback	Yes



DEPARTMENT OF PATHOLOGY

NUMBER OF HOURS REQUIRED – 16hrs.

Name of Component	Total hours
Introduction to Advance techniques in Oncopathology	08
Hands on techniques in PCR and Gel electrophoresis	08

Resource Faculty:

- Dr.Jyothi.A.Raj, Prof. & HOD, Department of Pathology, RRMCH.
- Dr.Vamseedhar.A, Prof. , Department of Pathology, RRMCH.
- Dr.Shashikala.K., Prof., Department of Pathology, RRMCH.
- Dr.Prabhakar.S, Senior Research Scientist, Central Research Laboratory, RRMCH.

Course Co-ordinator:

- Dr.Vamseedhar.A, Prof. , Department of Pathology, RRMCH.

TEACHING & LEARNING METHODS

Interactive Lectures, Hands-on training in Advance Techniques in Oncopathology.

EVALUATION:

Assessment in the domains of Knowledge, Skills and Attitude relevant to the subspecialty.

Formative Assessment:

- Case based discussions(CBD).
- Feedback.

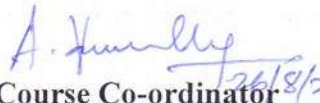
Summative assessment:


- Pretest and Post test [MCQs].

CERTIFICATE CRITERIA:

E-certificate will be given after successful completion of the course.

FEEDBACK ABOUT THE COURSE.


Course Co-ordinator
Professor
Department of Pathology
RRMCH, Bangalore


Signature of HOD
Prof & HOD
Department of Pathology
RRMCH, Bangalore