

Year *	Content	July	August	September/ October	November/ December	January/ February	March/ April	May	June	
1	Block	Cytogenetics Block 1				Molecular Genetics Block 1				
	Core Training	Orientation Pre-Analytics – Week 1 Blood setup and culture Cytogenetic test cases/scoping	Prenatal/ POC setup and culture Cytogenetic test cases/scoping	Blood/prenatal/ POC analysis & interpretation CMA wet lab/ analysis	FISH wet lab and scoping Cancer setup and culture	Orientation – Week 1 Pre-analytics DNA extraction RNA assays	STR MLPA Trinucleotide Repeat Expansion	Sanger Sequencing/ NGS Introduction	Molecular case review & signouts Research Proposal	
	Site	1	1	1	1	1	1	1	1	
	Other Training			Read ½ cases constitutional cases; Participate in CMA analysis interpretation and report	Interpretation. Integrate FISH with constitutional cases and CMA; provide Understand the FISH/Cancer cytogenetics workflow- read FISH cases and integrate with G-band	In-Service Exam		Test Validation	Medical Genetics Clinic	
	Site			1	1	1		1	2 and 3	
	Didactics		Monthly in-service	Q580 – Basic Human Genetics; Q613- Molecular & Biochemistry Laboratory		Q612-Molecular and Biochemistry Didactics Q620 Human Cytogenetics/Q630 Population Genetics				

Year	Content	July	August	September/ October	November/ December	January/ February/March	April	May	June
2	Block	Cytogenetics Block 2				Molecular Genetics Block 2			
	Core Training	CMA analysis/ Interpretation/ reporting		Cancer chromosome & FISH analysis/ Interpretation/Reporting		NGS	Pathology Laboratory Rotation	Pharmacogenomics/Open Array	
	Site	1		1		1	4	1	
	Other Training	Medical Genetics Clinic/URDC	Newborn Screen Laboratory	Integration of Prenatal with Cytogenetics, FISH and CMA; Read FISH and G-band Cancer cases; provide interpretation	Take Laboratory Calls & Consultations Prenatal Genetic Counseling	In-Service Exam NGS 101 (AMP) Research	NGS Research	Pharmacogeno mics: Genes, Drugs, and Genotyping - AMP Research	Research
	Site	2 and 3		1	3	1		1	1
	Didactics	Lab Administration certificate course (AMP) Monthly In-Service		G504-Introduction to Research Ethics Q600 Practical Prenatal Genetic Counseling					

Year	Content	July	August -December
3	Block	Biochemical Genetics rotation	Area of Concentration in Cytogenetics, Molecular, Pharmacogenomics or NGS
	Core Training		Case Sign-outs for Cytogenetics/Molecular/Pharmacogenomics/Diagnostic Genomics (NGS) Laboratories (rotate weekly-primary responsibility) CAP QA/QC for Cytogenetics/Molecular/Pharmacogenomics/Diagnostic Genomics (NGS) Laboratories
	Site	1	1
	Other Training	Research/Teaching/ Test validation	Manuscript Submission Research/Teaching/Test validation
	Location	1	1
	Site		Course lectures/MMGE Department seminar

* A 30-month training program

- Site 1 IU Genetic Testing Lab
- Site 2 IU Health Univ Hospital
- Site 3 Riley Children Hospital
- Site 4 IU Health Path Lab

NOTE: Each fellow has a 2-week vacation time per year, that can be scheduled in coordination with the Program Director.

Abbreviations: Product of conception (POC), Chromosomal microarray (CMA), Fluorescence in situ hybridization (FISH), Short tandem repeat (STR) testing, Multiplex Ligation-dependent Probe Amplification (MLPA), Next generation sequencing (NGS), Undiagnosed Rare Disease Clinic (URDC), Association for Molecular Pathology (AMP), College of American Pathologists (CAP), Quality Assurance (QA), Quality Control (QC), Medical & Molecular Genetics (MMGE).