

**SRM UNIVERSITY**  
**FACULTY OF ENGINEERING & TECHNOLOGY**  
**DEPARTMENT OF BIOINFORMATICS**

**BI0210- BIOTECHNOLOGY LABORATORY**

**LESSON PLAN**

**Semester: IV**  
**Sub Code: BI0210**  
**Hrs/Week: 3**

**Course: Biotechnology Laboratory**  
**Staff Handling: Dr. Lilly M Saleena**  
**Mrs. S. Shobana, Ms. P.Rathi Suganya.**

<b>Lecture Hour</b>	<b>Topic</b>	<b>Learning outcome</b>
1-3	Isolation of Genomic DNA from blood	<ul style="list-style-type: none"><li>• Isolation of genomic DNA and RNA</li><li>• Electrophoresis</li></ul>
4-6	Formaldehyde gel electrophoresis of RNA	
7-9	Isolation of antibodies	
10-12	Purification of antibodies	
13-15	Immunoelectrophoresis	
16-18	Blood grouping	
19-21	Leucocyte count	<ul style="list-style-type: none"><li>• Purification methods</li></ul>
22-24	PBMC preparation and their enumeration	
25-27	Production of polyclonal antibodies – preparation of antigen – protocol for immunization in rabbits	
28-30	Methods of bleeding-purification of polyclonal antibodies	
31-33	Antigen-antibody reaction-Haemagglutination, precipitation-Widal and VDRL	
34-36	Immunodiffusion, Immunoelectrophoresis.	
37-39	Affinity chromatography for antibody purification.	<ul style="list-style-type: none"><li>• Blotting technique</li></ul>
40-42	ELISA-DOT and plate ELISA	
43-45	Western blotting	

**REFERENCE BOOKS**

1. A hand book of Practical and Clinical Immunology by Talwar GP and Gupta SK Vol.12 CBS Publication

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