



Allergy, Immunology and Cell Biology Unit

University of Sri Jayewardenepura

Gangodawila, Nugegoda

Sri Lanka

Telephone: (+94)112804038 | Email: office.aicbu@sjp.ac.lk



Programme Overview: Six Week Internship (Rs 200,000)

This intensive **6-week internship** is designed to provide BSc Biotechnology and Medical Laboratory Science graduates with practical, hands-on experience in essential laboratory techniques and methodologies. Hosted by the **Allergy, Immunology, and Cell Biology Unit (AICBU)** at the University of Sri Jayewardenepura, the programme aims to bridge the gap between academic learning and real-world applications, enhancing both technical skills and professional competence.

Duration:

6 weeks, offering focused exposure to a range of laboratory procedures and instrumentation.

Objectives:

- **Skill Development:** Equip interns with practical skills in advanced laboratory techniques.
- **Professional Experience:** Provide exposure to real-world laboratory environments and research projects.
- **Technical Proficiency:** Develop competence in handling sophisticated laboratory instruments and conducting complex assays.

Structure:

1. **Orientation (1 Week):**
 - Introduction to AICBU and its operational protocols.
 - Overview of safety procedures and regulatory compliance.
2. **Core Training Modules (4 Weeks):**
 - **Laboratory Instrumentation:** Training in the use and maintenance of essential laboratory equipment.
 - **Stock Solution and Reagent Preparation:** Techniques for accurate preparation of solutions and reagents.
 - **Reagent and Consumable Sterilization:** Methods to ensure sterility in laboratory consumables.
 - **Sample Collection and Preparation (Serum Separation):** Procedures for collecting and preparing biological samples.
 - **Basics of Nucleic Acid Extraction:** Fundamental techniques for extracting DNA and RNA.
 - **Total Human Genomic DNA Extraction:** Detailed protocols for isolating human genomic DNA.
 - **Nanodrop™ Spectrophotometry:** Training in quantifying nucleic acids and proteins using spectrophotometry.



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- **Agarose Gel Electrophoresis:** Techniques for separating nucleic acids by size.
- **Polymerase Chain Reaction (PCR):** Amplification of DNA sequences using PCR.
- **Introduction to DNA Sequencing:** Basics of determining nucleotide sequences in DNA.
- **Biosafety Practices:** Training in maintaining a safe laboratory environment.
- **In-house ELISA:** Performing enzyme-linked immunosorbent assays for detecting antigens or antibodies.
- **HAT Assay:** Conducting hypoxanthine-aminopterin-thymidine selection assays.
- **SDS-PAGE, Western Blot, and Automated Western Blot:** Protein separation and identification techniques.
- **Bioinformatics Data Analysis (Workflows):** Introduction to computational analysis of biological data.
- **RBC Lysis and Cell Counting:** Techniques for red blood cell lysis and accurate cell quantification.

3. Project Assignment (1 Week):

- Interns will undertake a supervised project relevant to their training, culminating in a final report and presentation.

Host Organization:

The **Allergy, Immunology, and Cell Biology Unit (AICBU)** at the University of Sri Jayewardenepura

[Allergy and Immunology Unit](#)

Eligibility:

- Recent graduates with a BSc in Biotechnology or Medical Laboratory Science.
- Strong academic record and a demonstrated interest in laboratory research or diagnostics.

Application Process:

- Submit a resume, academic transcripts, and a statement of purpose.
- Attend an interview with the internship coordination team.

Outcomes:

Upon successful completion, interns will receive a certificate and a detailed performance evaluation, enhancing their prospects in the biotechnology and medical laboratory sectors