# Mastering Laboratory Skills

## Draft Programme - Two Week Lab component

<table>
<thead>
<tr>
<th>Day (9.30-5PM with breaks)</th>
<th>Week 1</th>
<th>Week 2</th>
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| **Monday**                 | Introduction  
                              Health and Safety  
                              Maintaining a safe working environment  
                              Calculations and solution preparation | PCR Optimisation Strategy  
                              Experimental Quality Control |
| **Tuesday**                | Microscopy  
                              Tissue Culture Techniques  
                              Sample Storage and Preparation | ELISA:  
                              1. Generation of Standard curve + sample analysis  
                              2. Data analysis |
| **Wednesday**             | Methods for nucleic acid and protein samples preparation  
                              1. DNA  
                              2. RNA  
                              3. Protein | Western Blot:  
                              1. Protein preparation  
                              2. Electrophoresis  
                              3. Membrane Transfer  
                              4. Primary antibody incubation |
| **Thursday**              | Tissue Culture  
                              Flow cytometry:  
                              1. Extracellular and Intracellular sample preparation  
                              2. Data acquisition  
                              3. Data analysis | Western Blot:  
                              1. Secondary Antibody incubation  
                              2. Detection techniques  
                              3. Data analysis  
                              Exam Prep |
| **Friday**                | PCR:  
                              1. Endpoint PCR  
                              2. Realtime Quantitative-PCR  
                              3. Data analysis | Data analysis  
                              Exam  
                              Course Evaluation |