

<b>Course Title/Code:</b>	<b>Laboratory Methods and Instrumentation (MMPH6001)</b>
<b>Department:</b>	Pathology
<b>Objective:</b>	To provide students with the basic understanding of the principles and latest developments in the practical applications of a broad range of techniques commonly employed in medical research projects.
<b>Content:</b>	<ol style="list-style-type: none"> <li>1. Immunohistochemistry</li> <li>2. Advance immunofluorescent technologies in molecular study</li> <li>3. Flow cytometry: principle and applications</li> <li>4. Protein analysis methods</li> <li>5. Conventional and molecular cytogenetics</li> <li>6. Automated DNA sequencing and genotyping</li> <li>7. Mutation detection technologies</li> <li>8. Epigenetics and methylation analysis</li> <li>9. Cancer stem cells: methods and protocols</li> <li>10. Animal models for research</li> </ol>
<b>Learning outcomes:</b>	<p>On completion of the course, the students are expected to:</p> <ul style="list-style-type: none"> <li>• understand the basic principles and the practical applications of a broad range of basic techniques routinely employed in medical research projects and the possible application in their own research projects</li> <li>• demonstrate their ability to self-study and write an essay</li> <li>• demonstrate their ability to make power point presentation on the essay topic</li> </ul>
<b>Prerequisite:</b>	None
<b>Duration:</b>	24 contact hours
<b>Assessment:</b>	In-course assessment (30%) and Final examination (70%)
<b>Remarks:</b>	Also offered to RPg from other Faculties at HKU