

Microbiology Department

Hamdard Institute of Medical Sciences & Research & HAHC Hospital

Name of the block	HIMSR
Name of elective	Basics in Molecular Diagnosis of infections
Location of Hospital lab or Research facility	BSL2 Laboratory, HIMSR
Name of Internal Preceptor(s)	Dr Ayan Kumar Das Dr Sarita Yadav
Name of External preceptor if applicable	-
Number of students that can be accommodated in this elective	4
Learning objectives of the elective	<p>A. Basics of Molecular Biology:</p> <ol style="list-style-type: none"> 1. Structure of DNA and RNA 2. Transcription and translation 3. Prokaryotic, eukaryotic and Viral genome <p>B. Methods of DNA/ RNA extraction</p> <ol style="list-style-type: none"> 1. Manual methods 2. Kit based methods <p>C. Gene amplification</p> <ol style="list-style-type: none"> 1. PCR 2. Real time PCR <p>D. Post amplification analysis</p> <ol style="list-style-type: none"> 1. Gel electrophoresis 2. Fluorescence signal amplification 3. Reverse hybridization
List of activities of student participation	<ol style="list-style-type: none"> 1. Work daily with a supervisor in observing, assisting and performing all tests 2. Participate in departmental education activities 3. Present at least one seminar- as a work up
Learning resources	SOP of Lab
Portfolio entries required	<ol style="list-style-type: none"> 1. Documentation of worked up cases/tests 2. Documentation of tests put/assisted
Log Book entry required	Completion of posting signed by preceptor signed by meets expectation (M) grade
Assessment	Formative: Attendance, day to day participation in departmental activities, performance of assigned tasks and presentation of worked up case/tests in departments
Other comments	NA