

# Biochemistry and Laboratory Medicine

*Applied Biochemistry and Laboratory Medicine content is not centered within a single course but is integrated throughout the medical curriculum, contextually associated with relevant body systems physiologic or pathologic states. Content related to applied biochemistry and laboratory medicine can be found in the following areas of the UGME program:*

## **Foundations of Clinical Medicine I-IV**

### **Introduction to Biomedical Sciences Module: Immunology**

**Pathology:** approach to laboratory diagnostics, gross anatomic and histopathologic diagnosis

**Haematology/Oncology:** hemoglobinopathies, coagulation disorders, tumour markers, other

**Cardiovascular:** lipid metabolism, biochemical markers of congestive heart failure, cardiac ischemia, other

**Respiratory:** arterial blood gas analysis, other

**Gastrointestinal:** biochemical markers of hepatic, pancreatic, other gastrointestinal diseases or presentations, bilirubin metabolism, nutrition assessment, other

**Kidney/Urinary Tract:** acid-base balance, electrolytes, urine testing, renal function, other

**Musculoskeletal:** autoantibody testing, acute phase response markers, synovial fluid analysis, other

**Endocrine:** biochemistry of pituitary, adrenal, thyroid, pancreatic islet, parathyroid glands, hypercalcemia, diabetic states, other

**Reproductive:** hormonal biochemistry in relation to puberty, pregnancy, and disease states.

### **Histology and microanatomy**

**Microbiology:** cultures, gram stains, PCR, serologies, other

**Pharmacology:** therapeutic levels, toxicity monitoring, basis of dosing adjustment

<b><i>Core Rotations of Clerkship</i></b> <b><i>Clinical Selectives</i></b> <b><i>Clinical Electives Course</i></b>	<b><i>Laboratory Medicine</i></b> plays a significant role in the diagnostic process used daily during clinical experiential rotations.
<b><i>Selected Topics in Medicine</i></b>	Laboratory Medicine Bootcamp Sessions. Applied biochemistry and laboratory medicine are also included in presentation/disease specific sessions