The Department of Pathology and Laboratory Medicine offers courses to medical students and undergraduate courses to students in the medical laboratory technology program (Faculty of Health Sciences). The department offers four-year residency training programs in pathology and laboratory medicine.

**PATH 229  Pathology**  \(108.72; 9 \text{ cr.}\)

Undergraduate teaching of mechanisms of diseases (general pathology) and morphological and pathophysiological aspects of organ diseases (systemic pathology).

**IDTH 221/222  Introduction to Medicine**

See Department of Internal Medicine.

**PATH 260  Elective in Pathology**  \(0.180.\)

An elective open to Med IV students. The purpose of this clerkship is to expose the students to the general principles of surgical pathology and cytopathology. The student participates in the daily teaching activities of the department, learns general dissection skills, and sits in on the sign-out sessions. During the rotation, the student is required to make a presentation on a topic of interest, and encouraged to participate in an investigative research project. *One to two months.*

**LABM 262  Elective in Laboratory Medicine**  \(0.180-360.\)

A clerkship offered year round to Med IV students. This clerkship consists of daily practical training, supplemented by lectures and seminars to cover the disciplines of clinical chemistry, clinical microbiology and immunology, clinical hematology, blood banking and transfusion medicine and cytogenetics. This elective is available in these various disciplines of laboratory medicine and may be adjusted according to the interest of the candidate. During the rotation, the student is required to make a presentation on a topic of interest, and encouraged to participate in an investigative research project. *One to two months.*
LABM 287  Internship  0.180-360.
Same as LABM 262. Offered to rotating interns. One to two months.

Clinico-Pathology Conferences
Med III, IV, and staff in collaboration with the departments of Surgery, Internal Medicine, Pediatrics, Obstetrics and Gynecology, Diagnostic Radiology, Ophthalmology, and Otolaryngology, and Head and Neck Surgery.

Courses Offered for Medical Laboratory Technology Students

LABM 201/202  Clinical Chemistry I and II  2.0; 2 cr.
A pair of courses in which the main objective is to acquaint students with fundamentals of clinical chemistry, including various analytical procedures, instrumentation, and methods used for determination of clinical analyses. Correlation of laboratory results with clinical manifestation is also an integral part of these courses. These two courses cover all aspects of routine clinical chemistry testing, such as carbohydrates, electrolytes, acid-base balance, blood gases, nitrogen metabolites, proteins, enzymes, liquids and lipoproteins, and liver function.

LABM 210  Cytology and Histological Techniques  32.0; 2 cr.
A course that includes a series of lectures and demonstrations on cell biology, a review of normal histology of various human organs, a description of examples of pathological changes, lectures on techniques of tissue handling, and preparation and staining of sections and smears for cytological material. Members of the department and the Department of Human Morphology.

LABM 220  Clinical Chemistry and Endocrinology  0.128; 4 cr.
Practical experience in clinical chemistry and endocrinology. Eight weeks.

LABM 230  Clinical Hematology and Reception  0.128; 4 cr.
Practical experience in clinical hematology and reception. Eight weeks.

LABM 233  Genetics and Molecular Biology  2.0; 2 cr.
A course that includes an introduction to human genetics, comprising the structure and function of DNA and the classification of genetic disorders. Diagnostic techniques in human genetics (cytogenetics, biochemical, and molecular) will be covered, as well as molecular techniques applied in pathology and microbiology.

LABM 234  Special Topics/Techniques in Laboratory Medicine  2.0; 2 cr.
A course that provides theoretical knowledge in specialized topics including endocrinology, chromatography, toxicology, tumor markers, therapeutic drug monitoring, flowcytometry, molecular testing, advanced clinical microbiology, antimicrobial agents, blood banking and transfusion medicine, and total quality management.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>LABM 235</td>
<td>Medical Mycology</td>
<td>1.0; 1 cr.</td>
<td>A course that covers the different kinds and types of fungi (yeast and mold). This course discusses their disease spectrum mode of infection, gross requirements, and cultural and non-cultural methods of identifications as well as antifungal drugs and susceptibility testing of fungi.</td>
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<tr>
<td>LABM 240</td>
<td>Clinical Microbiology</td>
<td>0.128; 4 cr.</td>
<td>Practical experience in clinical microbiology (aerobic and anaerobic bacteriology, mycobacteriology, mycology, and susceptibility testing). <em>Eight weeks.</em></td>
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<tr>
<td>LABM 250</td>
<td>Clinical Parasitology and Urinalysis</td>
<td>0.64; 2 cr.</td>
<td>Practical experience in clinical microscopy pertaining to parasitology, urinalysis, and spermogram as well as in the use of different types in microscopy methods for diagnosing particulate material. <em>Four weeks.</em></td>
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<tr>
<td>LABM 260</td>
<td>Serology</td>
<td>0.64; 2 cr.</td>
<td>Practical experience in clinical immunology and serodiagnostic techniques for infectious and non-infectious diseases. <em>Four weeks.</em></td>
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<tr>
<td>LABM 270</td>
<td>Blood Banking</td>
<td>0.64; 2 cr.</td>
<td>Practical experience in blood banking and transfusion medicine. <em>Four weeks.</em></td>
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<tr>
<td>LABM 280</td>
<td>Cytogenetics, Molecular Diagnostics and Histotechniques</td>
<td>0.64; 2 cr.</td>
<td>Practical experience in cytogenetics, molecular diagnostics and histotechniques. <em>Four weeks.</em></td>
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