MEDICAL LABORATORY SCIENCE

Admission to Program

Admission to the program is explained in the HCT Admission Policy described in the Academic Policies section of this Catalog.

Program Mission

The Bachelor of Medical Laboratory Science at the Higher Colleges of Technology aims to produce skilled Emirati professionals in medical laboratory sciences who are work ready as medical laboratory science professionals delivering diagnostic care to a wide variety of patients/clients.

Program Description

The Bachelor of Medical Laboratory Science is a four-year professional program. Graduates are trained biomedical scientists who possess a broad range of knowledge in medical laboratory diagnostics with the ability to work proficiently and are culturally competent to deliver care to a wide range of clients/patients. The four years of undergraduate study integrates biomedical science theory, laboratory skills and supervised professional practice in a variety of clinical settings. Medical laboratory scientists are specialized in the area of clinical diagnostics, producing accurate results required by physicians and health care team members for treatment and management of patients and clients. Graduates possess professional knowledge in the areas of haematology, immunology, transfusion science, clinical chemistry, microbiology, molecular and cellular pathology, with the potential to specialize and advance their skills in specialist areas. These skills can be easily transferred to work competently in public health labs, municipality and forensic labs and in the biotechnology industry. Graduates who are successful in their program can take the credentialing exam for the American Society of Clinical Pathologists International (M.T ASCPi), which provides access to society activities and program recognition for those students who wish to advance their education into graduate studies.

Students are eligible for a one year Work Experiential Learning experience during their study.

Program Goals

1. Equip medical laboratory students with technical skills and analytical expertise who meet national and international standards.
2. Develop graduates with strong leadership qualities who actively contribute to the implementation and enforcement of health policies in the UAE.
3. Produce trained medical laboratory professionals who effectively comply with all legal, regulatory and ethical requirements.
4. Prepare graduates to demonstrate exceptional innovative thinking, problem-solving skills and excellent communication.
5. Graduate outstanding and competent medical laboratory professionals with a strong commitment to lifelong learning and growth.

Program Learning Outcomes

Bachelor of Medical Laboratory Science (Medical Laboratory Scientist) (NQF Level 7)

On successful completion of this program the graduate will be able to:

1. Apply knowledge, management and decision making aspects to provide quality medical laboratory diagnostic services in variety of healthcare settings.
2. Demonstrate knowledge of healthcare regulations and integrate deep knowledge of relevant technological advances and evidence-based practice to address challenges in the field of laboratory medicine.
3. Demonstrate effective cognitive and technical skills to analyze clinical specimens, formulate solutions and identify risks in order to deliver laboratory decisions to support and enhance clinical care.
4. Demonstrate skills in using equipment and advanced technologies, information systems, and communication devices that support safe medical laboratory practice in a variety of healthcare settings
5. Apply clinical research skills to investigate problems in the medical laboratory discipline and to assess and evaluate quality procedures as relevant.
6. Demonstrate professional and technical leadership attribute and be able to lead and work collaboratively within a multidisciplinary team in a diverse range of clinical laboratories to ensure safe medical laboratory practice.
7. Demonstrate the ability to apply entrepreneurship and innovation skills to incorporate new solutions into medical laboratory practice.
8. Demonstrate professional attributes including but not limited to ethics, life-long and independent learning, relevant to their role as medical laboratory technologists in the clinical laboratories.

Requirements
Completion Requirements

Bachelor of Medical Laboratory Science

Students must successfully complete a minimum of 126 credits as follows:

Code	Title	Credit Hours
Health Science Core Courses		24
Medical Laboratory Science Core Courses		54
Medical Laboratory Science Preceptorship Courses		15
General Studies		33
Total Credit Hours		**126**

Code	Title	Credit Hours
Health Science Core Courses		
Required Credits: 24		
HSC 1023	Chemistry for Health Sciences	3
HSC 1033	Anatomy and Physiology	3
HSC 1113	Introduction to Healthcare Systems and Professional Practice	3
HSC 1123	Work Health and Safety	3
HSC 1803	Medical Terminology for Health Sciences	3

HSC 4003	Research Methods for Health Sciences	3
HSC 4006	Capstone Research Project for Health Sciences	6

Medical Laboratory Science Core Courses

Required Credits: 54

HML 2013	Clinical Hematology I	3
HML 2033	Medical Microbiology	3
HML 2043	Clinical Chemistry I	3
HML 2053	Immunology	3
HML 2113	Systematic Bacteriology	3
HML 2143	Clinical Hematology II	3
HML 2153	Histotechnology	3
HML 2203	Clinical Chemistry II	3
HML 3003	Hemostasis	3
HML 3013	Parasitology, Virology, Mycology	3
HML 3023	Cytotechnology	3
HML 3033	Clinical Biochemistry	3
HML 3043	Transfusion Medicine	3
HML 3053	Laboratory Management	3
HML 3103	Applications in Molecular Diagnostics	3
HML 4016	Clinical Correlations	6
HML 4123	Pathology of Diseases	3

Medical Laboratory Science Preceptorship Courses

Required Credits: 15

HML 2213	Clinical Preceptorship I	3
HML 4006	Clinical Preceptorship II	6
HML 4116	Clinical Preceptorship III	6

General Studies

Required Credits: 33

English, Arabic or other Languages

Required Credits: 12

Humanities or Art

Required Credits: 3

Information Technology or Mathematics

Required Credits: 6

The Natural Sciences

Required Credits: 3

The Social or Behavioral Sciences

Required Credits: 9

Description	Data
Total Required Credits	126
Maximum Duration of Study	6 years
Minimum Duration of Study	4 years
Cost Recovery Program	No
Program Code	BHMLU
Major Code	HML

Ideal Study Plan
Recommended Sequence of Study

Year 1

Semester 1

		Credit Hours
AES 1003	Emirati Studies	3
HSC 1013	Human Biology	3
HSC 1113	Introduction to Healthcare Systems and Professional Practice	3
HSC 1803	Medical Terminology for Health Sciences	3
LSS 1003	Life and Future Skills	3
	Credit Hours	**15**

Semester 2

HSC 1023	Chemistry for Health Sciences	3
HSC 1033	Anatomy and Physiology	3
HSC 1123	Work Health and Safety	3
LSC 1103	Professional Communication and Reporting	3
LSS 1123	Basic Research Methods	3
	Credit Hours	**15**

Year 2

Semester 3

HML 2013	Clinical Hematology I	3
HML 2033	Medical Microbiology	3
HML 2043	Clinical Chemistry I	3
HML 2053	Immunology	3
AES 1013	Arabic Communications	3
	Credit Hours	**15**

Semester 4

AES 1033	Islamic Culture	3
HML 2113	Systematic Bacteriology	3
HML 2143	Clinical Hematology II	3
HML 2153	Histotechnology	3
HML 2203	Clinical Chemistry II	3
LSM 1113	Statistical Mathematics	3
	Credit Hours	**18**

Summer

HML 2213	Clinical Preceptorship I	3
	Credit Hours	**3**

Year 3

Semester 5

HML 3003	Hemostasis	3
HML 3013	Parasitology, Virology, Mycology	3
HML 3023	Cytotechnology	3
HML 3033	Clinical Biochemistry	3
ICT 2013	Computational Thinking and Coding	3
	Credit Hours	**15**

Semester 6

BUS 2403	Innovation and Entrepreneurship	3
HML 3043	Transfusion Medicine	3
HML 3053	Laboratory Management	3
HML 3103	Applications in Molecular Diagnostics	3
LSC 2223	Future Skills Capstone	3
	Credit Hours	**15**

Year 4

Semester 7

HML 4006	Clinical Preceptorship II	6
HML 4016	Clinical Correlations	6
HSC 4003	Research Methods for Health Sciences	3
	Credit Hours	**15**

Semester 8

HML 4116	Clinical Preceptorship III	6
HML 4123	Pathology of Diseases	3
HSC 4006	Capstone Research Project for Health Sciences	6
	Credit Hours	**15**
	Total Credit Hours	**126**

Faculty and Academic Staff

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