

## MEDICAL LABORATORY SCIENTISTS

A Medical Laboratory Scientist (MLS), also known as Medical Technologist, is a health professional that performs clinical lab tests, interprets the data, and manages the medical lab. Tests are done on blood, urine and other specimens to help diagnose and treat diseases, and to monitor health status. The MLS performs microscopy, phlebotomy, and operates computerized instruments. The MLS also helps physicians select appropriate tests, and is responsible for assuring the quality of the results.

While most MLS's are employed in hospitals and clinics, many are also in research, industrial labs, molecular diagnostics, veterinary medicine, forensic medicine, and other arenas.

## GENERAL STUDENT LEARNING OUTCOMES

At the completion of the Medical Technology curriculum, student is able to

- Meet the MLS entry-level skills for each discipline as specified by the Curriculum subcommittees. Skills include pre-analytical (e.g., specimen procurement, preparation, equipment calibration), analytical (e.g., analysis, instrument operation, quality control), and post-analytical (e.g., reporting, follow up). Major disciplines within the field include Hematology/Hemostasis, Clinical Chemistry, Clinical Microbiology, Urinalysis/Body Fluids/Microscopy, Molecular Diagnostics, Immunology/Serology, Immunohematology, Phlebotomy, and Laboratory Management.
- Demonstrate MLS entry-level knowledge of each discipline as specified by the Curriculum subcommittees. Knowledge include principle of analysis, sources of error, correlations, interpretations, managing unexpected outcomes, communications.
- Demonstrate MLS entry-level professionalism as specified by the Curriculum subcommittees, Professional traits include reliability, flexibility, integrity, ethics, initiative, and interpersonal relations.

## ADMISSION REQUIREMENTS

The University of Hawaii at Manoa (UHM) Department of Medical Technology is in the College of Health Sciences and Social Welfare, John A. Burns School of Medicine. Completion of the Medical Laboratory Technician (MLT) program at the Kapiolani Community College (KCC) or equivalent and a certification as an MLT is required before admission to the UHM Medical Technology major.

Admission criteria:

- Associate degree in MLT from KCC or equivalent;
- National certification as MLT;
- Minimum 2.5 GPA at KCC; and
- Apply to UHM (beware of deadlines)

You must also be able to perform the following essential functions:

- Manipulate labware to transfer or prepare reagents and samples (e.g., pipet, charge hemocytometers, prepare blood smears).
- Operate simple instruments according to instructions (e.g., cell counter, centrifuge, spectrophotometer).
- Perform microscopic examination on various specimens and report the results (e.g., leukocyte differential counts, cell morphology, urinary sediments).
- Follow written and verbal directions to perform laboratory tests and report results.

Additional skills are taught in the third and fourth years of the UHM curriculum.

For those who earned the MLT degree from colleges other than KCC, eligibility will be determined based on course work, GPA (overall and math/science), interviews, essays and external evaluations.

## ACADEMIC ADVISING

Academic advising is very important for timely progression through the curriculum. An interested student should seek academic advising on either campus to make sure the appropriate courses are taken. The KCC MLT program is located in the Health Sciences Department, 4303 Diamond Head Road, Kailua #122, Honolulu HI 96816 (Ph 808-734-9270; URL <https://www.kapiolani.hawaii.edu>).

You may embark on your academic pathway directly at KCC, then transfer back to UHM. Alternatively, you may start at UHM (e.g., as Pre-MedTech student) then transfer to KCC, and return to UHM upon completion of the MLT program.

For students from outside Oahu, you may want to check out the UHM Housing Service at <http://www.manoa.hawaii.edu/housing/> for on- and off-campus housing availabilities.

## SAMPLE CURRICULUM

In addition to the courses listed below, you must also fulfill the General Education Core (GEC) in order to complete the bachelor's degree. Refer to the UHM catalog (<http://www.hawaii.edu/gened/>) for more information.

Hawaiian/Second Language is waived for Medical Technology majors. A C or better must be earned for all MEDT and senior MICR courses; no more than one C-minus, D-plus or D is allowed in other required math/science courses.

Prior to matriculation to UHM, you must complete the KCC MLT program that includes: ENG 100, BIOL 171/L (Intro I, recommended), MATH 140 (Pre-calc, recommended), MICR 130 and 161, CHEM 161/L and 162/L (General), and GEC's (DA, DH, DS, etc.). Students from other MLT programs must have equivalent course work.

Once admitted to the UHM Medical Technology major, the following courses are required to complete the bachelor's degree. Note that some courses are available at Community Colleges and summer sessions at UHM.

#### JUNIOR, FALL

PHYL 301 (Human)  
CHEM 272+L (Organic I)  
MEDT 301 (Clinical Lab)  
MEDT 331 (Lab Mgmt)  
BIOL 172 (Intro II)

#### JUNIOR, SPRING

PHYL 302 (Human)  
CHEM 273 (Organic II)  
TRMD 431 (Parasitology)  
MEDT 431 (Clin Parasitology)  
MEDT 471 (Clin Bioc I)

#### SENIOR, FALL

MICR 461 (Immunol)  
MEDT 451+L (Hematology)  
MEDT 477 (Meth & Analy I)  
MEDT 472 (Clin Bioc II)

#### SENIOR, SPRING

BIOL 275 (Cell Mol Biol)  
MEDT 478 (Meth & Analy II)  
MEDT 464 (Immunocheme)  
MEDT 481 (Professional Issues)  
MICR 463 (Pathogens)

MEDT 591 POST-BACCALAUREATE CLINICAL TRAINING: A six-month Clinical Training (MEDT 591) follows graduation. Alternatively, with an MLT certification and a bachelor's degree, 2 years of work experience would qualify you to challenge the MLS national certification from American Society for Clinical Pathology (ASCP). Contact the academic advisor for detailed information.

#### **ACCREDITATION**

The Medical Technology program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences, 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119 (phone 773-714-8880, URL <http://www.naacls.org>).

#### **OTHER REQUIREMENTS**

- Professional liability insurance, which costs about \$40 per year.
- Immunizations: immunization for Hepatitis B virus is highly recommended.
- Clinical affiliates for MEDT 591 may have additional requirements (e.g., immunizations, TB clearance, CPR/AED training, criminal background check).

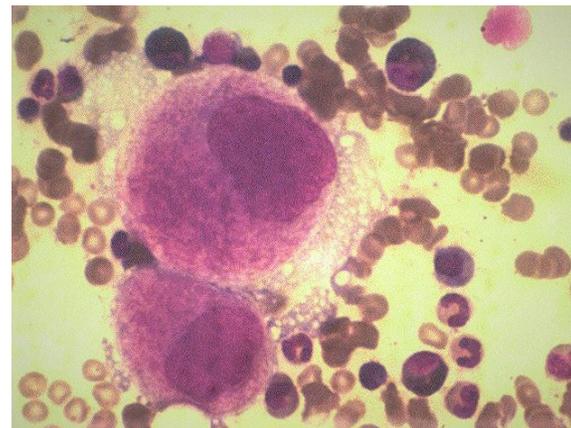
#### **FINANCIAL AID**

For information about financial aid at Manoa, contact the Financial Aid office at 808-956-7251 or URL <http://www.hawaii.edu/fas>.

#### **CERTIFICATION AND LICENSURE**

After Clinical Training, you are eligible to take an exam administered by a national certification agency. In Hawaii, both the certification and the state licensure are required for employment.

## Bachelor of Science in Medical Technology (Medical Laboratory Science)



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