Laboratory Studies, AS

Program Description

The Associate Degree in Laboratory Studies will train students in laboratory protocols and techniques and prepare them for jobs in clinical laboratory settings. It will give students exposure to coursework in biology, chemistry, and medical lab sciences. It is designed under the model of stackable credentials. Within the coursework, students can earn a Certificate of Medical Laboratory Assistant Technology that will serve as both an institutional as well as industry credential that would qualify students for jobs as a laboratory assistant. Certificate completion can occur in as little as two semesters. This stackable credential fits within the proposed associate degree. The associate degree itself would stack into any one of three existing bachelor's degrees, thus allowing a student to earn three awards during their undergraduate experience.

Program Curriculum

60 credits

Utah Tech General Education Requirements

All Utah Tech General Education requirements must be fulfilled. A previously earned degree may fulfill those requirements, but courses must be equivalent to Utah Tech's minimum General Education standards in American Institutions, English, and Mathematics.

Code	Title	Hours
General Education Core Requirements **(**catalog.utahtech.edu/programs/generaleducation/#gerequirementstext**)**		
English		3-7
Mathematics		3-5
American Institutions		3-6
Life Sciences		3-10
Physical Sciences		3-5
Fine Arts		3
Literature/Humanities		3
Social & Behavioral Sciences		3
Exploration		3-5

Code	Title	Hours
BIOL 1610 & BIOL 1615	Principles of Biology I (LS) and Principles of Biology I Lab (LAB)	5
BIOL 2060 & BIOL 2065	Principles of Microbiology and Principles of Microbiology Lab	4
BIOL 2320 & BIOL 2325	Human Anatomy and Human Anatomy Lab	5
BIOL 2420 & BIOL 2425	Human Physiology and Human Physiology Lab	4
BIOL 2890R	Introductory Life Science Internship	2
or MLS 2890R	Laboratory Internship	
COMM 2110	Interpersonal Communication (SS, GC)	3
MATH 1040	Introduction to Statistics (MA) (prerequisite: MATH 1010 or equivalent placement score)	3
or STAT 2040	Business Statistics	
MATH 1050	College Algebra / Pre-Calculus (MA) (or higher)	4
MLS 1113	Foundations of Medical Lab Science	3
Select one of the below chemistry tracks:		10
CHEM 1110 & CHEM 1115 & CHEM 1120 & CHEM 1125	Elementary General/Organic Chemistry (PS) and Elem General/Organic Chemistry Lab (LAB) and Elem Organic / Bio Chemistry and Elem Organic/Bio Chemistry Lab	
Or		

CHEM 1210	Principles of Chemistry I (PS)
& CHEM 1215	and Principles of Chemistry I Lab (LAB)
& CHEM 2310	and Organic Chemistry I
& CHEM 2315	and Organic Chemistry I Lab (Prerequisite to Organic Chemisty: CHEM 1220/1225)

Graduation Requirements

1. Complete a minimum of 60 college-level credits (1000 and above).
2. Complete at least 20 lower-division credits at Utah Tech for institutional residency.
3. Grade of C- or higher and cumulative GPA 2.0 or higher in all required courses.

Graduation Plan

1st Year

Fall Semester	Hours	Spring Semester	Hours
BIOL 1610 & BIOL 1615	5	BIOL 2060 & BIOL 2065	4
ENGL 1010	3	COMM 2110	3
SSC 1010	2	ENGL 2010	3
MATH 1040	3	MATH 1050	4
	13		**14**

2nd Year

Fall Semester	Hours	Spring Semester	Hours
BIOL 2320 & BIOL 2325	5	BIOL 2420 & BIOL 2425	4
CHEM 1110 & CHEM 1115	5	BIOL 2890R	2
MLS 1113	3	CHEM 1120 & CHEM 1125	5
General Education (Fine Arts) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)	3	General Education (American Institutions) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)	3
		General Education (Literature/Humanities) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)	3
	16		**17**

Total Hours 60

AS Laboratory Studies Degree Program Learning Outcomes (PLOs)

At the successful conclusion of this program, students will be able to:

1. Outline the foundational concepts of biology including cellular, organismic, ecological, and evolutionary biology.
2. Evaluate hypotheses, design research, test hypotheses, conduct data analysis, and draw conclusions on biology related problems.
3. Perform a full range of testing encompassing the pre-analytical, analytical, and post-analytical components of contemporary laboratory services.
4. Employ relevant experience in research design and practice.
5. Adhere to safety, governmental regulations and standards as applied to medical laboratory practice.