

# Curriculum

COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE
<b>General Education Requirements: 27 Credit Hours</b>					
ARL 101 (A)	Communication Skills in Arabic I (A)	ENG 200	English II	ISL 100 (A)	Islamic Culture (A)
MTG 100	Math for Life	FWS 205	UAE and GCC Society	STT 100	General Statistics
FWS 100	Academic Skills for Success	FWS305	Technical Communication for the Workplace	FWS 310	Fundamentals of Innovation and Entrepreneurship
<b>Degree Requirements: 41 Credit Hours</b>					
CHE205	General Chemistry I	CHE205L	General Chemistry Lab	BIO 205	General Biology I
BIO 205L	General Biology Lab	BME 380	Human Biology I	BME 381	Human Biology II
BMS 23110A	Protein Structure & Function	BMS 23110B	Protein Activity & Regulation	BMS 23110C	Enzymology
PBH 405	Chronic and Infectious Disease	PBH 101	Introduction to Public Health	BMS 302	Professional Practice Skills
BMS 23010B	Gene Expression	BMS 23010C	Molecular Genetic & Molecular Processes	BMS 23140A	Metabolism & Immune Cell Function
<b>Major Requirements: 51 Credit Hours</b>					
BMS 34010B	Quantitative Analysis	BMS 34010C	Bioinformatics	BMS 34010A	Biotechniques
BMS 3470A	Clinical Microbiology	BMS 3470B	Clinical Biochemistry I	BMS 400	Clinical Laboratory Management
BMS 34110B	Metabolic Disease I	BMS 44110B	Metabolic Disease II	BMS 34210A	Immunology I
BMS 44210A	Immunology II	BMS 4470A	Histopathology	BMS 4470B	Haematology I
BMS 34130A	Cancer Biology I	BMS 301	Systematic and Cellular Pathology	BMS 44130A	Cancer Biology II
BMS 401	Clinical Biochemistry II	BMS 402	Haematology II		
<b>Major Research, Placements and Electives: 12 Credit Hours</b>					
BMS 44910A	Biomedical Science Research Poster	BMS 44910B	Biomedical Science Oral Presentation	BMS 44910C	Biomedical Science Research Report
BMS 3401	Biomedical Science Placement 1	BMS 4401	Biomedical Science Placement 2		



## BACHELOR OF SCIENCE IN **BIOMEDICAL SCIENCES:** LABORATORY MEDICINE

## Program Overview

The cutting-edge BSc in Biomedical Sciences - Laboratory Medicine provides a multidisciplinary hub for innovation that integrates the fields of research, medicine, and biology. It expands scientific knowledge and delivers insight into the processes involved in human health and disease.

With research, education and exemplary service, our mission is to advance laboratory science and improve laboratory diagnostics by sharing our experience in the UAE and abroad. Students will be prepared to play a role in Lab Medicine field to sustain and appreciate a healthy working environment that provides opportunities for cooperation, success, and professional development on a regular basis.

You will gain practical experience to prepare you for a profession in this in-demand field. We offer excellent internship opportunities through affiliations with medical centers and other regional hospitals and diagnostic facilities. We incentivize and promote the continuous advancement of all students and assure hands-on training about new technologies and up-to-date knowledge in biomedical sciences.

## Graduates of the program will acquire the following knowledge and skills

They will perform analysis of complex chemical components of the human body fluids, assessment of cellular blood components, identification of microorganisms and their resistance to antibiotics, preparation of blood components for patient therapy, molecular and cellular detection of diseases, and evaluation of new methods, procedures and equipments used in the laboratory.

The accuracy of the findings ranging from procedures to the appropriate use of equipments is constantly checked by laboratory medicine experts and any issues that contribute to abnormalities are solved.

Graduates will learn and or improve their communication skills in order to work with other members of the healthcare team, to educate and handle individuals under their supervision creating and supporting a healthy working environment.



## Student's Testimonial

### Viyal Soni - Current Student

As a student enrolled in the B.Sc. Biomedical Science program, a practical program with a large focus on hands-on experience, adjustments to my learning methods were necessary given the current state of the world. ADU has made an immense effort throughout 2020 to continue our education through distance learning with lecturers and staff optimistically guiding us through this period. At first, I struggled to manage my time. A line between academics and personal time is difficult to find in the comfort of one's home; however, dedication allowed me to develop and hone this skill. Likewise, various positives can be taken away from my experience with distance learning; the most notable being virtual labs. These simulations allowed my colleagues and I to experience scenarios and develop problem solving skills at a scale that cannot be replicated in dry labs. Overall, throughout 2020 as well as the shift in learning medium, I have grown immeasurably as a student. I look confidently towards 2021 to explore my major in more depth, and hopefully gain hands-on experience with laboratory procedures at ADU.



## Career Prospects

The increase in the ageing population is expected to lead to an even greater need globally to diagnose medical conditions such as cancer or type 3 diabetes through laboratory procedures. In the USA alone, the overall employment of medical laboratory scientists and technicians is projected to grow by 13% from 2016 to 2026, faster than average for all other occupations. The work setting includes hospitals, research labs, educational institutions, and diagnostic facilities. Roles comprise of the following but are not limited to:

- Certified Medical Laboratory Scientist
- Diagnostic Product Developer
- Healthcare Administrator
- Laboratory Technician
- Research Technologist
- Physician Assistant
- Research Scientist
- Pharmaceuticals