(For students admitted in 2026-27 under the 4-year degree)

BSc in Biotechnology

In addition to the requirements of their major programs, students are required to complete the University and School requirements for graduation. For details please refer to the respective sections on this website.

Students may use no more than 9 credits earned from courses delivered in online mode, including HKUST self-paced online [SPO] courses and other online credits approved through the University's credit transfer procedures, to satisfy the graduation requirements of a degree program.

For students graduating with an additional major, they must take all the requirements specified for that major, within which they must complete at least 20 single-counted credits. These 20 credits cannot be used to fulfill any other requirements for graduation except for the 120-credit degree requirement.

Under the new 30-credit Common Core Program which is applicable to students admitted to the University in 2022-23 and thereafter, courses that have been counted towards School and/or Major Requirements are not allowed to be reused for fulfilment of the University Common Core Requirements. Students should look up the details of the Common Core Program including the general and School-/program-specific distributional requirements posted on the Common Core website where the link to it is available on this website.

Major Requirements

Students MUST take the following courses prior to enrollment into the major

Major Pre-requisite course(s)

			Credit(s) attained
LIFS		Note: Students with level 3 or above in HKDSE 1x Biology are exempted from taking LIFS 1901	0-3
LIFS	1901	General Biology I	3
LIFS	1902	General Biology II	3

Required Course(s)

			Credit(s) attained
LIFS		Note: Students with level 3 or above in HKDSE 1x Biology are exempted from taking LIFS 1903	0-1
LIFS	1903	Laboratory for General Biology I	1
LIFS	1904	Laboratory for General Biology II	1
LIFS	2040	Cell Biology	3
LIFS	2070	Introduction to Biotechnology	3
LIFS	2080	Plant Biology	3
LIFS	2210	Biochemistry I	3
LIFS	2220	Biochemistry II	3
LIFS	3150	Biostatistics	3

LIFS/SCIE		Note: LIFS 4963 OR (LIFS 4973 AND LIFS 4983) OR (SCIE 4500 AND LIFS 4983) (Students following IRE Track can only use (SCIE 4500 AND LIFS 4983) to fulfill the requirement.)	3-7
LIFS	4963	Biotechnology Capstone Project	3
LIFS	4973	Biotechnology Project Research I	3
LIFS	4983	Biotechnology Project Research II	4
SCIE	4500	IRE Research Project II	3
CHEM	1011	General Chemistry A: Reactions, Thermodynamics, and Reaction Kinetics	3
CHEM	1012	General Chemistry B: Atomic Structure, Molecules, and Bonding Theories	3
CHEM	1051	Laboratory for General Chemistry A	1
CHEM	1052	Laboratory for General Chemistry B	1
CHEM		Note: CHEM 2111 OR CHEM 2311	3
CHEM	2111	Fundamentals of Organic Chemistry	3
CHEM	2311	Analytical Chemistry	3
CHEM		Note: CHEM 2155 OR CHEM 2355	1
CHEM	2155	Fundamental Organic Chemistry Laboratory	1
CHEM	2355	Fundamental Analytical Chemistry Laboratory	1

Elective(s)

			Minimum credit(s) required
LIFS/BTEC/ OCES/PHYS/ BIEN/CENG		Biotechnology Electives (Courses from the specified elective list; Students following IRE Track are required to take a minimum of 15 credits; while others a minimum of 18 credits. Courses taken as Major/Track Required Courses may not be counted towards the elective requirement.)	15-18
LIFS		Any LIFS courses at 3000/4000-level	
LIFS	2010	Modern Approaches to Biochemical and Cell Biological Research	3
LIFS	2060	Biodiversity	3
LIFS	2240	Cell Biology Laboratory	3
LIFS	2720	Biochemistry Laboratory	2
LIFS	2820	Biochemical Laboratory Techniques	1
LIFS	2888	Introduction to Bioindustries	3
BTEC	5210	Principles and Application in Biotechnology	4
BTEC	5340	Biomarkers and Medical Devices	3
OCES	1010	Principles and Applications of Environmental Science	3
PHYS	2010	Introductory Biological Physics	3
BIEN	5050	Global Health Ethics	3
CENG	1110	Introduction to Chemical Engineering	3
CENG	4620	Bioproducts and Processing	3
CENG	4670	Pharmaceutical Engineering	3

Track Study

Students should follow one of the tracks and complete all requirements as specified

Applied Bioscience Track

Required Course(s)

			Credit(s) attained
LIFS	3040	Animal Physiology	3
LIFS	3060	Microbiology	3
LIFS	4370	Human Genetics and Personalized Medicine	3

Elective Course(s)

			Minimum credit(s) required
LIFS		Applied Bioscience Elective (3 courses from the specified list)	9
LIFS	2011	A Practicum on Wetland Conservation	3
LIFS	3220	Animal Physiology Laboratory	3
LIFS	3260	Microbiology Laboratory	3
LIFS	3370	Human Genetics in Practice	3
LIFS	4882	Investigative Pharmacology	3
LIFS	4884	Application of RNA Technology to Human Diseases	3

Entrepreneurship Track

Required Course(s)

			Credit(s) attained
LIFS	2888	Introduction to Bioindustries	3
LIFS	3110	Biotechnological Application of Recombinant DNA Techniques	3
LIFS	3140	General Genetics	4
LIFS	4200	Concepts and Issues in Contemporary Biotechnology	3
LIFS	4630	Advanced Topics in Biotechnology	3
BIBU	4820	Biotechnology Entrepreneurship and Business Operations	3

International Research Enrichment Track

Students in the IRE Track should also take SCIE 4500 and LIFS 4983 as specified in the major requirements.

Required Course(s)

			Credit(s) attained
LIFS	3070	Introduction to Biophysical Instrumentation	3
SCIE	3500	IRE Research Project I	3

Others	Note: With approval by the program office, students should follow the curriculum of the Applied Bioscience Track, and complete all of its requirements.	18