

Ministry of Higher Education and Scientific Research

Scientific Supervision and Evaluation device

Department of Quality Assurance and Academic Accreditation

International Accreditation Department



***Academic Program Description For the
Department of Biology for the Academic year
2025-2026***

UNIVERSITY OF BABYLON

Academic Program Description Form

University Name: University of Babylon

College/Institute: College of Science for Women

Name of the academic or professional program: Bachelor's in Biology

Name of final degree: Bachelor's in Biology

Study system: semester + Bologna track

Description preparation date: : 17/ 12/2025

Date of filling out the file: : 11/ 2/ 2026

Signature:

Name of Department Head

Ekhlas Mohammed Ali Al Shareefi

Date: 11 / 2 /2026

Signature:

Name of Scientific Assistant

Kawther Mohammed Ali

Date: 11 / 2 /2026

The file is checked by

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 11 / 2 / 2026

Signature:

Mohammed J.Jader

Approval of the Dean

Academic Program Description

1. Program Vision

Spreading awareness and knowledge in the fields of life sciences by providing researchers and professors who are able to deal with the recent changes and developments taking place in science and technology to keep pace with the development of the times and contribute to the development of our scientific, health, industrial and environmental institutions. The academic program of the Department of Life Sciences offers studies related to the diversity of living organisms, their evolution, and the differences in the biological and environmental systems in which they live. Hence his four-dimensional specialization in the study of zoology, botany, microbiology, ecology, and everything related to other sciences, as well as knowledge and understanding in the use of laboratory equipment and microscopes and how to conduct laboratory analysis..

2. Program Mission

In order to achieve the vision of the College of Science for Girls and to play its pioneering role in assuming a prominent scientific position among local, Arab and foreign colleges, the Life Sciences Department seeks to disseminate and consolidate the latest information and applications of useful technology in Iraqi society to keep pace with the tremendous development that has been achieved during the last three decades in this field and on All levels.

The Department of Life Sciences at the College of Science for Girls seeks, in integration with the college's mission, to meet the community's needs for modern technologies in the field of Biology in all scientific and practical applications, especially in the medical and industrial fields, in addition to communications, and what this requires of preparing specialized research cadres to work in this field and to keep up with the latest developments. Developments therein

3. Program Objectives

Spreading awareness and knowledge in the fields of life sciences by providing researchers and professors who are able to deal with the recent changes and developments taking place

in science and technology to keep pace with the development of the times and contribute to the development of our scientific, health, industrial and environmental institutions. The academic program of the Department of Life Sciences offers studies related to the diversity of living organisms, their evolution, and the differences in the biological and environmental systems in which they live. Hence his four-dimensional specialization in the study of zoology, botany, microbiology, ecology, and everything related to other sciences, as well as knowledge and understanding in the use of laboratory equipment and microscopes and how to conduct laboratory analyses..

4. Programmatic Accreditation

nothing

5. Other External Influences

nothing

6. Program Structure

<i>Program Structure</i>	<i>Number of courses</i>	<i>Credit hours</i>	<i>Percentage</i>	<i>Reviews</i>	
Enterprise Requirements	The first stage, Course (1), according to the Bologna system	2	The first stage, Course (1), according to the Bologna system	4	Basic
	The first stage, Course (2), according to the Bologna system	2	The first stage, Course (2), according to the Bologna system	5	
	The second stage, Course (1), according to the Bologna system	1	The second stage, Course (1), according to the Bologna system	2	

	The second stage,Course (2), according to the Bologna system	3	The second stage,Course (2), according to the Bologna system	7	%23.3	
	The third stage Course (1)	-	The third stage Course (1)	-	-	
	The third stage Course (2)	1	The third stage Course (2)	2	%11.1	
	Fourth stage Course (1)	-	Fourth stage Course (1)	-	-	
	Fourth stage Course (2)	1	Fourth stage Course (2)	2	%11.7	
Total summation		10		19		
College Requirements	The first stage,Course (1), according to the Bologna system	1	The first stage,Course (1), according to the Bologna system	5	%16.6	Basic
	The first stage,Course (2), according to the Bologna system	1	The first stage,Course (2), according to the Bologna system	4	%13.3	
Total summation		2		9		
Department Requirements	The first stage,Course (1), according to the Bologna system	3	The first stage,Course (1), according to the Bologna system	21	%70	Basic
	The first stage,Course (2), according to the Bologna system	3	The first stage,Course (2), according to the Bologna system	21	%70	

	The second stage, Course (1), according to the Bologna system	5	The second stage, Course (1), according to the Bologna system	28	%93.3	
	The second stage, Course (2), according to the Bologna system	5	The second stage, Course (2), according to the Bologna system	23	%76.6	
	The third stage Course (1)	7	The third stage Course (1)	19	%100	
	The third stage Course (2)	6	The third stage Course (2)	16	%88.8	
	Fourth stage Course (1)	8	Fourth stage Course (1)	15	%100	
	Fourth stage Course (2)	7	Fourth stage Course (2)	15	%88.2	
Total summation		48		143		

7. Program Description

Year/level	course code	Name of the course	Credit hours	
			Theoretical	Practical
The first stage, Course (1), according to the Bologna system	UOBAB0601011	General Zoology	2	2
	UOBAB0601012	Analytical Chemistry	2	2
	UOBAB0601013	General Mathematics	2	/

	UOBAB0601014	Biophysics	2	2
	UOBAB0601015	Human Rights and Democracy	2	/
	UOBAB0601016	English	2	/
The first stage, Course (2), according to the Bologna system	UOBAB0601021	Botany General	2	2
	UOBAB0601022	Organic Chemistry	2	2
	UOBAB0601023	Biostatistics	2	/
	UOBAB0601024	Safety and Biosecurity	2	/
	UOBAB0601025	Computer Science I	2	2
	UOBAB0601026	Arabic Language	2	/
The second stage, Course (1), according to the Bologna system	BIO2311	I Entomology	2	2
	BIO2312	Plant Anatomy	2	2
	BIO2303	Invertebrates	2	2
	BIO2314	Microbiology I	2	2
	BIO2305	Plant Groups	2	2
	UOBAB2301	Crimes of the defunct Baath	2	-
The second stage, Course (2), according to the Bologna system	BIO2421	II Entomology	2	2
	BIO2422	Plant Taxonomy	2	2
	BIO2415	Biochemistry	2	2
	BIO2424	Microbiology II	2	2
	BIO2413	Parasitology	2	2
	UOBAB2001	Arabic Language II	2	-
	UOBAB2302	II English Language	2	-
	UOBAB2004	Computer Science II	2	1
	Bisc310	Pathogenic analysis	2	2

The third stage Course (1)	Bisc312	Plant Physiology	2	2
	Bisc311	Cell Biology	2	2
	Bisc309	Animal Physiology	2	2
	BISC307	Ecology	2	2
	Bisc312	Water & soil microbiology	2	2
The third stage Course (2)	Bisc316	English Language	2	/
	Bisc315	Hematology	2	2
	Bisc314	Physiology of Microbiology	2	2
	Bisc311	Genetics	2	2
	Bisc309	Heamatology	2	2
	Bisc321	Histology	2	2
	Bisc319	Pollution	2	2
	Bisc320	Immunology	2	2
The fourth stage Course (1)	BISC318	Science Philosophy	2	/
	Bisc326	Biotechnology	2	2
	Bisc325	Biodiversity	2	2
	Bisc316	Food microbiology	2	2
	Bisc322	Pathogenic bacteria	2	2
	MBMG400	Molecular biology	2	2
	Bisc324	Medical entomology	2	2
	Bisc323	Mycology	2	2
The fourth stage Course (2)	BISC318	English Language	2	2
	Bisc326	Medical plant	2	2
	Bisc325	Antibiotic	2	2

	Bisc316	Graduation Project	2	/
	Bisc322	Chordate	2	2
	MBMG400	Industry microbiology	2	2
	Bisc324	Genetic of microbiology	2	2
	Bisc323	Virology	2	2

8. The expected learning outcomes of the program

Knowledge

Knowledge and Understanding

- 1- -To become familiar with the concept of microbiology, zoology, and botany.
- 2- To classify the needs for developing examinations and tests to investigate microorganisms
- 3- To be able to measure quality control tests and confirmatory tests for microscopic tests
- 4- Analyze the results of the tests and submit reports on those tests.
- 5- To evaluate the cost and needs of opening microscopy laboratories in the health, agricultural and industrial fields.

Skills

Subject-Specific Skills

1. The student's knowledge of the concept of microbiology.
2. The student's ability to conduct tests and operate and maintain the operation of various laboratory equipment.
3. Enabling students to analyze the results and write the laboratory report on the examination results.
4. Reviews of quality control methods for examinations

Thinking Skills	<p>1 - Thinking skill according to ability. The goal of this skill is for the student to believe in what is tangible (the student's abilities) and understand when, what and how he should think and work to improve the ability to think reasonably.</p> <p>2- High thinking skill (the goal of this skill is to teach thinking well before making the decision that determines the student's life)</p>
-----------------	--

Ethics

Evaluation methods	<ol style="list-style-type: none"> 1- Exams 2- Learning Matrix 3- Which Face 4- CAT (student feedback) 5- Learning Triangle
--------------------	--

9. Teaching and Learning Strategies

Learning strategies

1-Thinking strategy according to the student's ability (for example: if the student is able to learn the correct concept of management, he will acquire the skill of managing and organizing his personal life).

2- High thinking skill strategy (for example, if the student wants to make a good decision, it is important that he thinks well before he makes the decision, and if he decides without thinking, or if he cannot think well, or if he cannot decide, or perhaps he will not decide, then this This means he does not have high thinking skills.)

3- Critical thinking strategy in learning (Critical Thanking) (It is a term that symbolizes the highest levels of thinking, which aims to pose a problem and then analyze it logically to reach the desired solution).

4-Brainstorming

Methods of teaching and learning

- 1- Method of giving lectures.
- 2- Student Center
- 3- Student groups
- 4- Workshops
- 5- (Scientific trips to follow up on the environmental reality)
- 6- Learning Technologies on Campus
- 7- (Experiential learning)
- 8- Application Learning)

10. Evaluation methods

- 1- Exams
- 2- Learning Matrix
- 3- Which Face
- 4- CAT (student feedback)
- 5- Learning Triangle

11. Faculty

Faculty Members

<i>Academic Rank</i>	<i>Instructor's name</i>	<i>Specialization</i>		<i>Special Requirements /skills (it applicable)</i>	<i>Number of the teaching staff</i>	
		<i>General</i>	<i>Special</i>		<i>staff</i>	<i>lecturer</i>
professor	Dr. Abdul Nabi Jawaid,	Biology	Microbiology - Immunity		√	
professor	Dr.. Ali Hussein Muhammad,	Biology	Microbiology - Genetic Engineering		√	
professor	Dr.. Muhammad Ibrahim Al-Dhafiri,	Biology	Microbiology, Environment		√	
professor	Dr. Dakhel Ghani	Biology	Animal Physiology		√	
professor	Dr. Huda Jassim Muhammad	Biology	plant		√	
professor	Dr. Abeer Fawzi Murad,	Biology	Microbiology		√	
professor	Dr.. Kawthar Muhammad	Biology	Microbiology		√	
professor	Dr. Hussein Jabr Hussein,	Biology	Plant		√	
professor	Dr. Raad Abbas Khadem,	Biology	Parasitology		√	
professor	Dr. Ihsan Falih	Biology	Microbiology		√	
professor	Dr. Ali Malik Saad	Biology	Microbiology - Immunology		√	
professor	Dr. Israa Adnan Ibrahim,	Biology	genetic engineering		√	
professor	Dr. Shaima Obaid Abdullah	Biology	Hematology		√	
professor	Dr.. Shaima Ahmed Rahim,	Biology	Animal Physiology		√	
professor	Fatima Moin Abbas	Biology	Microbiology		√	
professor	Dr.. Hawraa Wahab	Biology	Genetics		√	
Assistant Professor	Dr . Ikhlas Muhammad Ali	Biology	Zoology - Insect Immunology		√	

Assistant Professor	Dr . Zeina Shaker Khalil,	Biology	Microbiology Immunity		√	
Assistant Professor	Dr.. Tasahil Hamid Kazem	Biology	Pathological Bacteria		√	
Assistant Professor	Dr.. Hawraa Jawad Kazem,	Biology	physiology,microbiology		√	
Assistant Professor	Dr.. Salah Eidan	Biology	Plant		√	
Assistant Professor	Dr.. Zainab Abdel Nabi,	Biology	Viruses		√	
Assistant Professor	Dr.. Nadia Muhammad Tawfiq	Biology	Environment		√	
Assistant Professor	Dr.. Sama Jawad Kazim	Biology	Nanotechnology		√	
Assistant Professor	Dr.. Nisreen Kazem Radi,	Biology	food microbiology		√	
Assistant Professor	Dr. Ishraq Abdel Amir	Biology	Biotechnology		√	
Assistant Professor	Nebras Muhammad Sahi	Biology	Zoology - Insects		√	
Assistant Professor	Sabreen Abdel Amir Kamal	Biology	Microbiology		√	
Assistant teacher	Zainab Haider Al Moussawi,	Biology	Environment		√	
Assistant teacher	Wurood Hamza	Biology	Environment		√	
Assistant teacher	Wurood Kazem	Biology	parasitology		√	
Assistant teacher	Sherine Sabah	Biology	Microbiology		√	

Assistant teacher	Rola Dhaher	Biology	Plant		√	
Assistant prof	Ahmed Habib,	Biology	Plant		√	
Assistant teacher	Ahmed Abbas	Biology	Genetics		√	
Assistant teacher	Karim Muhammad Kazem, Law	Law	Law		√	

Professional Development

Mentoring new faculty members

Teaching, like any other art, can be acquired by practicing and following its methods and principles, provided that there is a sincere desire to practice the teaching profession, and the method in education means taking interconnected steps to reach a specific goal that you hope to achieve. Therefore, it must follow the basic principles of good teaching, which are:

- 1- Directing and guiding learners by creating educational situations that lead to desirable activities.
- 2- Providing an atmosphere of love, kindness and cooperation between the teacher and the learners and between the learners themselves through his love for his students without discrimination and not excessive feminization.
- 3- Adopting democratic leadership through the emotional relationship between the teacher and his students, which leads them to control based on mutual respect and creating a cooperative atmosphere between the students and between the teacher and his students.

Professional development for faculty members

1- Thinking strategy according to the student's ability (for example: if the student is able to learn the correct concept of management, he will acquire the skill of managing and organizing his personal life). And the high thinking skill strategy (for example, if the student wants to make a good decision, it is important that he thinks well before he makes the decision, and if he decides without thinking or if he cannot think well or if he cannot decide or perhaps he will not decide, this means He does not have high thinking skills.)

- 2- General and transferable skills (other skills related to employability and personal development).
- 3- Verbal communication.
- 4- Teamwork.
- 5- Analysis and investigation (collecting information systematically and scientifically to establish facts and principles for solving the problem).

12. Acceptance criterion

Central acceptance and parallel acceptance

13. The most important sources of information about the program

- 1- The website of the college and university.

<https://csg.uobabylon.edu.iq/>

<https://csg.uobabylon.edu.iq/department/?cdid=4>

https://csg.uobabylon.edu.iq/department/dep_lectures.aspx?cdid=4

- 2- University guide .<https://systems.uobabylon.edu.iq/>

- 3- The most important books and resources in the college library.

14. Program development plan

The Bologna Process was applied to the students of the first stage, and work is being done to apply it to the next stages, along with conducting workshops and seminars to familiarize faculty members with the requirements of the Bologna Process and how to work with it, and to discuss the negatives and obstacles and find solutions for them. The electronic system was applied in the education process.

Program skills Outline

Required program learning outcomes

<i>Year/Level</i>	<i>Course Code</i>	<i>Course Name</i>	<i>Basic or optional</i>	<i>Knowledge</i>				<i>Skills</i>				<i>Ethics</i>				<i>Other skills related to employability and personal development</i>			
				<i>A₁</i>	<i>A₂</i>	<i>A₃</i>	<i>A₄</i>	<i>B₁</i>	<i>B₂</i>	<i>B₃</i>	<i>B₄</i>	<i>C₁</i>	<i>C₂</i>	<i>C₃</i>	<i>C₄</i>	<i>D₁</i>	<i>D₂</i>	<i>D₃</i>	<i>D₄</i>
			Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
			Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
			Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
			Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
			Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
			Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*



Program skills Outline

				<i>Required program learning outcomes</i>															
<i>Year/Level</i>	<i>Course Code</i>	<i>Course Name</i>	<i>Basic or optional</i>	<i>Knowledge</i>				<i>Skills</i>				<i>Ethics</i>				<i>Other skills related to employability and personal development</i>			
				<i>A₁</i>	<i>A₂</i>	<i>A₃</i>	<i>A₄</i>	<i>B₁</i>	<i>B₂</i>	<i>B₃</i>	<i>B₄</i>	<i>C₁</i>	<i>C₂</i>	<i>C₃</i>	<i>C₄</i>	<i>D₁</i>	<i>D₂</i>	<i>D₃</i>	<i>D₄</i>
The first stage, Course (2), according to the Bologna system			Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
			Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
			Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
			Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
			Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
			Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Program skills Outline

				Required program learning outcomes															
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics				Other skills related to employability and personal development			
				<i>A₁</i>	<i>A₂</i>	<i>A₃</i>	<i>A₄</i>	<i>B₁</i>	<i>B₂</i>	<i>B₃</i>	<i>B₄</i>	<i>C₁</i>	<i>C₂</i>	<i>C₃</i>	<i>C₄</i>	<i>D₁</i>	<i>D₂</i>	<i>D₃</i>	<i>D₄</i>
Second stage Course (1)	BIO2311	I Entomology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	BIO2312	Plant Anatomy	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	BIO2303	Invertebrates	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	BIO2314	Microbiology I	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	BIO2305	Plant Groups	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

	UOBAB2301	Crimes of the defunct Baath	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
--	-----------	-----------------------------	-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Program skills Outline

				<i>Required program learning outcomes</i>															
<i>Year /Level</i>	<i>Course Code</i>	<i>Course Name</i>	<i>Basic or optional</i>	<i>Knowledge</i>				<i>Skills</i>				<i>Ethics</i>				<i>Other skills related to employability and personal development</i>			
				<i>A₁</i>	<i>A₂</i>	<i>A₃</i>	<i>A₄</i>	<i>B₁</i>	<i>B₂</i>	<i>B₃</i>	<i>B₄</i>	<i>C₁</i>	<i>C₂</i>	<i>C₃</i>	<i>C₄</i>	<i>D₁</i>	<i>D₂</i>	<i>D₃</i>	<i>D₄</i>
Second stage Course (2)	BIO2421	II Entomology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	BIO2422	Plant Taxonomy	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	BIO2415	Biochemistry	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	BIO2424	Microbiology II	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	BIO2413	Parasitology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	UOBAB2001	Arabic Language II	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

	UOBAB2302	English II Language	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	UOBAB2004	Computer Science II	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*



Program skills Outline

				Required program learning outcomes															
Year /Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics				Other skills related to employability and personal development			
				A ₁	A ₂	A ₃	A ₄	B ₁	B ₂	B ₃	B ₄	C ₁	C ₂	C ₃	C ₄	D ₁	D ₂	D ₃	D ₄
The third stage Course (1)	Bisc313	Pathogenic analysis	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc315	Plant Physiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

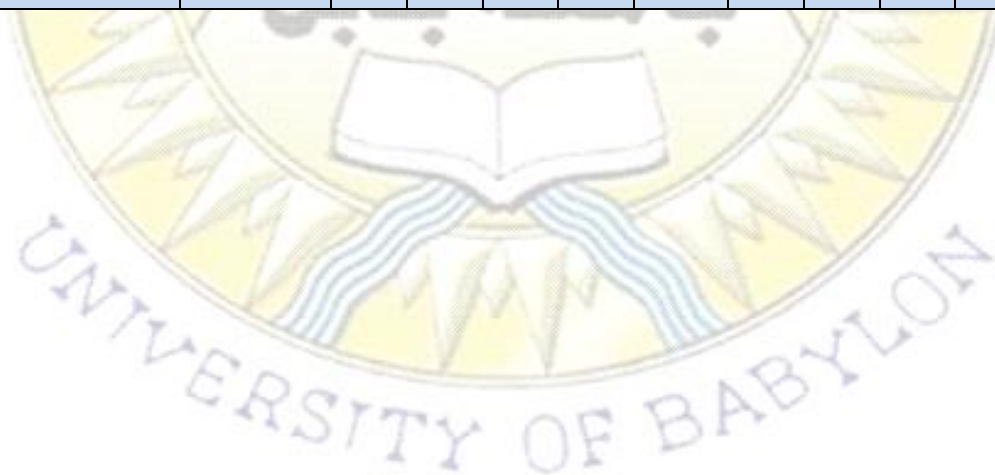
	Bisc311	Cell Biology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc309	Animal Physiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	BISC307	Ecology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc312	Water & soil microbiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*



Program skills Outline

				Required program learning outcomes															
Year /Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics				Other skills related to employability and personal development			
				<i>A₁</i>	<i>A₂</i>	<i>A₃</i>	<i>A₄</i>	<i>B₁</i>	<i>B₂</i>	<i>B₃</i>	<i>B₄</i>	<i>C₁</i>	<i>C₂</i>	<i>C₃</i>	<i>C₄</i>	<i>D₁</i>	<i>D₂</i>	<i>D₃</i>	<i>D₄</i>

The third stage Course (2)	Bisc316	English Language	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc315	Hematology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc314	Microbiological Physiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc311	Genetic	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc309	Animal Histology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	BISC307	Pollution	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*



Program skills Outline

Required program learning outcomes

<i>Year /Level</i>	<i>Course Code</i>	<i>Course Name</i>	<i>Basic or optional</i>	<i>Knowledge</i>				<i>Skills</i>				<i>Ethics</i>				<i>Other skills related to employability and personal development</i>			
				<i>A₁</i>	<i>A₂</i>	<i>A₃</i>	<i>A₄</i>	<i>B₁</i>	<i>B₂</i>	<i>B₃</i>	<i>B₄</i>	<i>C₁</i>	<i>C₂</i>	<i>C₃</i>	<i>C₄</i>	<i>D₁</i>	<i>D₂</i>	<i>D₃</i>	<i>D₄</i>
The fourth stage Course (1)	BISC318	Science Philosophy	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc326	Biotechnology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc325	Biodiversity	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc316	Food Microbiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc322	pathogenic Bacteriology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	MBMG400	Molecular Biology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc324	Medical Entomology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc323	Mycology II	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Program skills Outline

				Required program learning outcomes															
Year /Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics				Other skills related to employability and personal development			
				<i>A₁</i>	<i>A₂</i>	<i>A₃</i>	<i>A₄</i>	<i>B₁</i>	<i>B₂</i>	<i>B₃</i>	<i>B₄</i>	<i>C₁</i>	<i>C₂</i>	<i>C₃</i>	<i>C₄</i>	<i>D₁</i>	<i>D₂</i>	<i>D₃</i>	<i>D₄</i>
The fourth stage Course (2)	BISC318	English Language	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc326	Medical Plants	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc325	Antibiotic	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc316	Research Project II	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc322	Chordata	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	MBMG400	Industrial Microbiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Bisc324	Microbial Genetics																	
	Bisc323	Virology																	