Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2025

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2024 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational proce

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .....Tikrit university .....
Faculty/Institute: .....College of science .....
Scientific Department: .....Biology .....
Academic or Professional Program Name:... Bachelor of Biology...
Final Certificate Name: ..... Bachelor of Biology....
Academic System: ……**Semesters** ……
Description Preparation Date: 5/10/2024
File Completion Date: 2025/02/14

Signature:
Head of Department Name: ASSIST. prof. Dr. Ahmed A. Adhan
Date:

Signature:
Scientific Associate Name:
Date:

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. Program Vision

Creating a distinguished scientific base for basic sciences that meets the requirements of society and industrial institutions and fills their needs, so that the college becomes unique with a distinguished scientific personality to achieve academic standards and reach Arab and international accreditation during the next five years.

2. Program Mission

Providing an advanced educational environment and developing a nucleus for scientific research capable of providing society with scientific competencies and trained specialized personnel through the introduction of the latest scientific technologies.

3. Program Objectives

1- Creating awareness and belief among the graduate in the civilizational mission of our nation and its pioneering and historical role in the emergence of human scientific civilization and its scientific development.
2- Preparing the specialized graduate who is familiar with the theoretical foundations of basic sciences and their field applications.
3- Providing the graduate with the scientific expertise required by the future field of work and informing him of the latest technical developments.
4- Creating a qualified cadre to engage in the field of university education in the future and capable of advancing the educational process in the various fields of science.
5- Qualifying scientific researchers who have the correct foundations for scientific research and development to be able to support the scientific and technological research movement in the country.
6- Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development.
7- Qualifying distinguished graduates who are able to engage in postgraduate studies to contribute effectively to science to solve complex scientific and technical dilemmas to develop other scientific and technical fields.
8- Preparing scientific cadres that deal rationally with science in order to serve humanity and the environment and have an effective role in global scientific activity through their contribution to international scientific conferences.
9- Paying attention to forming the basic base for specialized postgraduate studies in the relevant departments and encouraging them to do so in order to keep pace with development.

10- Upgrading the level of technical and administrative staff to support the educational process and create new capabilities commensurate with quality requirements.
11- Diversifying sources of educational culture and linking the student's scientific concepts to the problems of the surrounding environment.

4. Program Accreditation

Does the program have program accreditation? And from which agency?
12- Achieving educational goals and outcomes that meet distinguished academic standards.
13- Developing and developing the capabilities of faculty members.
14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

no

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	**8**	**90**		**Essential**
College Requirements	**Yes**			
Department Requirements	**Yes**			
Summer Training	**Yes**			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
4		**Genetic microbiology**		**practical**

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	A1- To create an appropriate environment that promotes learning and growth and imparts the ability to work with multidisciplinary groups in professional, health and research organizations A2- To expand and deepen their abilities in analytical and experimental research methods, data analysis, and drawing relevant conclusions for scientific writing and presentation. A3- Introducing the student to the basic principles related to the science of pathological analysis and everything related to it.
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 - Learn the ability to remember B3 - Learn the ability to relate and deduce
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	1-Powerpoint 2- PDF 3- Word 4- Educational videos

9. Teaching and Learning Strategies

At the end of the year, the student will be familiar with the following:
1- Introducing the student to the basic principles related to genetic microbiology analyses
2- The teaching of this course aims to cover topics in theoretical foundations that include the process of mechanisms for the occurrence of pathological conditions, the disorders that occur, and the diseases resulting from these disorders.
3 - The student gets to know the natural forms and pathological conditions, as well as the student's knowledge of normal and abnormal values (genetic microbiology conditions), as well as teaching the student the genetic microbiology conditions that lead to an increase or decrease in these values.
4- Giving the student an expanded and modern idea about the science of pathological analyzes and the normal and abnormal ranges, in addition to the changes that occur when infected with various diseases.

10. Evaluation methods

Weekly, monthly, daily exams and the end-of-semester exam.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
lecturer	Biology	Microbiology			/	

Professional Development
Mentoring new faculty members
Orienting new faculty members.
Professional development of faculty members
Professional development for faculty members.

12.Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.The most important sources of information about the program

Medical Microbiology. 4th edition.

14.Program Development Plan

Updating curricula according to recent scientific discoveries.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024/2025		Genetic Microbiology	Basic		*					*			*		

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Genetic microbiology
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
14/ 02/ 2025
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
45 hours per semester
7. Course administrator's name (mention all, if more than one name)
Name: Fatima M. Mahdi Email: ffatima.m.mahdi@tu.edu.iq
8. Course Objectives

At the end of the year, the student will be familiar wi the following: **1- Introducing the student to the basic principles rela to Genetic microbiology** **2- - The teaching of this course aims to cover topics in theoretical foundations that include the process of mechanisms for the occurrence of Genetic microbiolo the disorders that occur, and the diseases resulting fr these disorders.** **3 - The student gets to know the natural forms and Genetic microbiology conditions, as well as the stude knowledge of normal and abnormal values (patholog conditions), as well as teaching the student the Genet microbiology conditions that lead to an increase or decrease in these values.** **4- Giving the student an expanded and modern i about the science of Genetic microbiology analyzes the normal and abnormal ranges, in addition to changes that occur when infected with various diseas**	• ..... • ..... • .....

9. Teaching and Learning Strategies

Strategy	1- Educational strategy, collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	2	1- Providing students with analysis skills. 2- Informing students about the most important modern source in the field of pathological analyses.	**Genetic microbiology**	1-Learn the ability to understand and assimila 2- Learn the ability to remember 3- Learn t ability connect a deduce	Weekly, monthly, daily, writt and end-semester exams.

11.Course Evaluation

The distribution is as follows: 25 marks for monthly and daily exams for the semester. 50 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Medical Microbiology. 4 edition.
Main references (sources)	MICROBIOLOGY AND GENETICS Issue: Why Microbiology Matters 05 May 2020 **ARTICLE**
Recommended books and references (scientific journals, reports...)	Del Duca S, Vassallo A, Mengoni Fani R. Microbial Genetics a Evolution. Microorganisms. 2022 23;10(7):1274. c 10.3390/microorganisms10071274. PMID: 35888993; PMC PMC9315481.
Electronic References, Websites	Electronic references, Internet sites

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Faculty/Institute: .....College of science .....
Scientific Department: .....Biology .....
Academic or Professional Program Name:... Bachelor of Biology...
Final Certificate Name: ..... Bachelor of Biology....
Academic System: ……**Semesters** ……
Description Preparation Date: 5/10/2024
File Completion Date: 2025/02/14

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. Program Vision

Creating a distinguished scientific base for basic sciences that meets the requirements of society and industrial institutions and fills their needs, so that the college becomes unique with a distinguished scientific personality to achieve academic standards and reach Arab and international accreditation during the next five years.

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3- Providing the graduate with the scientific expertise required by the future field of work and informing him of the latest technical developments.
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requirements.
11- Diversifying sources of educational culture and linking the student's scientific concepts to the problems of the surrounding environment.

4. Program Accreditation

Does the program have program accreditation? And from which agency?
12- Achieving educational goals and outcomes that meet distinguished academic standards.
13- Developing and developing the capabilities of faculty members.
14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

no

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	8	90		Essential
College Requirements	Yes			
Department Requirements	Yes			
Summer Training	Yes			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
4		Industrial microbiology	theoretical	practical

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	A1- Introducing the student to the basic field related to the field of industrial microbiology A2- - Formulating this course into a vocabulary of topics in the

	emerging foundations that include the industrial fermentation process. And the student learns about the different types of microorganisms that are important for industry, as well as knowing the ways in which these microorganisms affect industry and is able to produce A3- Giving the student an expanded idea and conversation about industrial microbiology and learning about the ways microorganisms influence and impact various industries.
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 - Learn the ability to remember B3 - Learn the ability to relate and deduce
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	1- Powerpoint 2- PDF 3- Word 4- Educational videos

9. Teaching and Learning Strategies

At the end of the year, the student will be familiar with the following:
1- Introducing the student to the basic principles related to industrial microbiology and microbial fermentations
2- Teaching this course aims to introduce topics on theoretical foundations that include the process of exploiting microorganisms in various industries.

3 - The student learns about the types of microorganisms that can be exploited industrially and increase fermentation processes and other types that are harmful and negatively affect manufacturing processes and microbial fermentations.
4- Giving the student an expanded idea and talk about industrial fermentations and the microorganisms used in industrial fermentations to obtain desirable products.

10. Evaluation methods

Weekly, monthly, daily exams and the end-of-semester exam.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)	Number of the teaching staff	
	General	Special		Staff	Lecturer

Assistant Prof	Biology	Industerial microbiology			/	

Professional Development
Mentoring new faculty members
Orienting new faculty members.
Professional development of faculty members
Professional development for faculty members.

12.**Acceptance Criterion**

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.**The most important sources of information about the program**

-Modren industrial microbiology and biotechnology , 2007, Nduka Okafor, USA

14.Program Development Plan

Updating curricula according to recent scientific discoveries.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024/2025		Industrial microbiology	Basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Industrial microbiology
2. Course Code:
3. Semester / Year:
4/8
4. Description Preparation Date:
14/ 02/ 2025
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours per semester
7. Course administrator's name (mention all, if more than one name)
Name: Sura Hameed Nayyef Email: surabio84@tu.edu.iq
8. Course Objectives

At the end of the year, the student will be familiar with the following: **1-** Introducing the student to the basic principles related to industrial microbiology and microbial fermentations 2- Teaching this course aims to introduce topics on theoretical foundations that include the process of exploiting microorganisms in various industries. 3 - The student learns about the types of microorganisms that can be exploited industrially and increase fermentation processes and other types that are harmful and negatively affect manufacturing processes and microbial fermentations. 4- Giving the student an expanded idea and talk about industrial fermentations and the microorganisms used in industrial fermentations to obtain desirable products.	• ..... • ..... • .....

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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1 2 3 4 5 6 7 8 9 10 11 12 13 14	2 2 2 2 2 2 2 2 2 2 2 2 2 2	1- Providing students with th skill of detection and methods for isolating industrially important microorganisms 2- Informing students about the most important mode sources in the field of industria microbiology.	Pathologi analysis	1-Learn the ability to understand And assimilate 2- Learn the ability to remember 3- Learn the ability connect and deduce	Weekly, monthly, daily, written and end-of-semester exams.

11.Course Evaluation

The distribution is as follows: 25 marks for monthly and daily exams for the semester. 50 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Essentials of Industrial Microbiology, Basanta Rai.2012
Main references (sources)	-Modren industrial microbiology a biotechnology , 2007, Nduka Okafor, US
Recommended books and references (scientific journals, reports...)	FOOD AND INDUSTRIAL MICROBIOLOGY, S Senan, R. K. Malik & ShilpaVij
Electronic References, Websites	https://www.researchgate.net/

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Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

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Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

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6- Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development.
7- Qualifying distinguished graduates who are able to engage in postgraduate

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12- Achieving educational goals and outcomes that meet distinguished academic standards.
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14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

no

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	**3**	**90**		**Essential**
College Requirements	**Yes**			
Department Requirements	**Yes**			
Summer Training	**Yes**			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description				
Year/Level	**Course Code**	**Course Name**	**Credit Hours**	
2025-2024/4		**Medical insects and arachnids**	**theoretical**	**practical**

8. Expected learning outcomes of the program	
Knowledge	
Learning Outcomes 1	Giving general definitions of the basics of insects, identifying the insect's external parts and internal organs, and studying the pathological conditions that arise from insects and their relationship to the general health of humans and animals, the spread and distribution of insects, the periods of their appearance, and the conditions affecting that.
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 - Learn the ability to remember B3 - Learn the ability to relate and deduce
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	1- Powerpoint 2- PDF 3- Word 4- Educational videos

9. Teaching and Learning Strategies

A- Cognitive objectives

1- Enabling students to know the science of medical insects and their benefits and harms

2- Introducing students to insect species that are harmful and beneficial to humans and animals

3- Teaching students how to write the scientific name of the studied insect species

4- Identify the existing local insect species

5- To recall the information he studied carefully and verify it practically.

10. Evaluation methods

Weekly, monthly, daily exams and the end-of-semester exam.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Assistant Prof	Biology	Entomology			/	

Professional Development
Mentoring new faculty members
Orienting new faculty members.
Professional development of faculty members
Professional development for faculty members.

12.Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.The most important sources of information about the program

The book of medical insects and arachnids, by Salem Jamil Jarjis.

14.Program Development Plan

Updating curricula according to modern information and applications in medical entomology and activating field work.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024/2025		Medical insects and arachnids	Basic	—					—					—	

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Medical insects and arachnids
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
14/ 03/ 2025
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours per semester
7. Course administrator's name (mention all, if more than one name)
Name:Ahmed Ali Essa + Estabraq Mahmood Mahdi Email: e.m.mahdee@tu.edu.iq +dhefaf.radi@tu.edu.iq dhefaf.radi
8. Course Objectives

At the end of the year, the student will familiar with the following: Introducing the student to the general a basic material in medical entomology The importance of identifying the ins families and orders that contain medici insects Identify the importance of medical inse and their role in transmitting pathogens Viewing preserved insect specimens students to identify the insect species t transmit pathogens	• ..... • ..... • .....

9. Teaching and Learning Strategies

Strategy	1- Educational strategy, collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2 3 4 5 6 7 8 9 10 11 12 13 14	2	1- Providing students with analysis skills. 2- Informing students about the most important mode sources in the field of entomology	Medical insects a arachnids	1-Learn the ability to understand and assimila 2- Learn the ability to remember 3- Learn t ability connect a deduce	Weekly, monthly, da written a end-of-semester exams.

11.Course Evaluation

The distribution is as follows: 25 marks for monthly and daily exams for the semester. 50 marks for final exams

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Medical insects and arachni Written by: Salem Jamil Jarjis Inse _ Structure and Function - R. L. Gapman
Main references (sources)	
Recommended books and references (scientific journals, reports...)	The Physiology of Insects - Writ by: Thabet Al-Darkzali https://www.google scholar
Electronic References, Websites	https://www.researchgate.net/

Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2025

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2024 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

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Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine

the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .....Tikrit university .....
Faculty/Institute: .....College of science .....
Scientific Department: .....Biology .....
Academic or Professional Program Name:... Bachelor of Biology...
Final Certificate Name: ..... Bachelor of Biology....
Academic System: ……**Semesters** ……
Description Preparation Date: 5/10/2024
File Completion Date: 2025/02/14

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. Program Vision

Creating a distinguished scientific base for basic sciences that meets the requirements of society and industrial institutions and fills their needs, so that the college becomes unique with a distinguished scientific personality to achieve academic standards and reach Arab and international accreditation during the next five years.

2. Program Mission

Providing an advanced educational environment and developing a nucleus for scientific research capable of providing society with scientific competencies and trained specialized personnel through the introduction of the latest scientific technologies.

3. Program Objectives

1- Creating awareness and belief among the graduate in the civilizational mission of our nation and its pioneering and historical role in the emergence of human scientific civilization and its scientific development.
2- Preparing the specialized graduate who is familiar with the theoretical foundations of basic sciences and their field applications.
3- Providing the graduate with the scientific expertise required by the future field of work and informing him of the latest technical developments.
4- Creating a qualified cadre to engage in the field of university education in the future and capable of advancing the educational process in the various fields of science.
5- Qualifying scientific researchers who have the correct foundations for scientific research and development to be able to support the scientific and technological research movement in the country.
6- Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development.
7- Qualifying distinguished graduates who are able to engage in postgraduate studies to contribute effectively to science to solve complex scientific and technical dilemmas to develop other scientific and technical fields.
8- Preparing scientific cadres that deal rationally with science in order to serve humanity and the environment and have an effective role in global scientific activity through their contribution to international scientific conferences.
9- Paying attention to forming the basic base for specialized postgraduate studies in the relevant departments and encouraging them to do so in order to keep pace with development.

10- Upgrading the level of technical and administrative staff to support the educational process and create new capabilities commensurate with quality requirements.
11- Diversifying sources of educational culture and linking the student's scientific concepts to the problems of the surrounding environment.

4. Program Accreditation

Does the program have program accreditation? And from which agency?
12- Achieving educational goals and outcomes that meet distinguished academic standards.
13- Developing and developing the capabilities of faculty members.
14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

no

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	8	90		Essential
College Requirements	Yes			
Department Requirements	Yes			
Summer Training	Yes			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
4		Medical mycology	theoretical	practical

8. Expected learning outcomes of the program

Knowledge

Learning Outcomes 1	A1- To create an appropriate environment that promotes learning and growth and imparts the ability to work with multidisciplinary groups in professional, health and research organizations A2- To expand and deepen their abilities in analytical and experimental research methods, data analysis, and drawing relevant conclusions for scientific writing and presentation. A3- Introducing the student to the basic principles related to the science of pathological analysis and everything related to it.
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 - Learn the ability to remember B3 - Learn the ability to relate and deduce
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	1-Powerpoint 2- PDF 3- Word 4- Educational videos

9. Teaching and Learning Strategies

At the end of the year, the student will be familiar with the following:
1- Introducing the student to the basic principles related to Medical mycology analyses
2- - The teaching of this course aims to cover topics in theoretical foundations that include the process of mechanisms for the occurrence of Medical mycology conditions, the disorders that occur, and the diseases resulting from these disorders.
3 - The student gets to know the natural forms and pathological conditions, as well as the student's knowledge of normal and abnormal values (Medical mycology conditions), as well as teaching the student the Medical mycology conditions that lead to an increase or decrease in these values.
4- Giving the student an expanded and modern idea about the science of pathological analyzes and the normal and abnormal ranges, in addition to the changes that occur when infected with various diseases.

10. Evaluation methods

Weekly, monthly, daily exams and the end-of-semester exam.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Lecturer	Biology	**Medical mycology**			/	

Professional Development
Mentoring new faculty members
Orienting new faculty members.
Professional development of faculty members
Professional development for faculty members.

12.Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.The most important sources of information about the program

- **Medical Mycology Current Trends and Future Prospects 1st Edition Edited By Mehdi Razzaghi-Abyaneh, Masoomeh Shams-Ghahfarokhi, Mahendra Rai Copyright 2016 Mycology Basics Series: Medical Mycology By: Dr. Fayadh Muhammed Sharif.**
- Mycology Basics Series: Medical Mycology By: Dr. Fayadh Muhammed Sharif.
- The most important medicinal fungi and their diseases - methods of isolation, diagnosis and treatment.
- Dr. Zidan Khalif Omran Al-Mamouri
- Dr. Karima Amin Hussein Al-Khafaji

14.Program Development Plan

Updating curricula according to recent scientific discoveries.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024/2025		Medical mycology	Basic		*					*			*		

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Medical mycology
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
14/ 02/ 2025
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours per semester
7. Course administrator's name (mention all, if more than one name)
Name: HUMAM SAADI HUSSEIN Email: humam.s.hussein@tu.edu.iq
8. Course Objectives

At the end of the year, the student will be familiar with the following: **1- Introducing the student to the basic principles relat to Medical mycology analyses** **2- - The teaching of this course aims to cover topics in theoretical foundations that include the process of mechanisms for the occurrence of Medical mycology conditions, the disorders that occur, and the diseases resulting from these disorders.** **3 - The student gets to know the natural forms and pathological conditions, as well as the student's knowledge of normal and abnormal values (Medical mycology conditions), as well as teaching the student t Medical mycology conditions that lead to an increase decrease in these values.** **4- Giving the student an expanded and modern idea ab the science of Medical mycology analyzes and the nor and abnormal ranges, in addition to the changes that oc when infected with various diseases.**	• ..... • ..... • .....

9. Teaching and Learning Strategies	
Strategy	1- Educational strategy, collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	2	1- Providing students with analysis skills. 2- Informing students about the most important modern source in the field of pathological analyses.	**Medical mycology**	1-Learn the ability to understand and assimila 2- Learn the ability to remember 3- Learn t ability connect a deduce	Weekly, monthly, daily, writt and end-semester exams.

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The distribution is as follows: 25 marks for monthly and daily exams for the semester. 50 marks for final exams

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Main references (sources)	- Mycology Basics Series: Medical Mycology By: Dr. Fayadh Muhammed Sharif.

	- The most important medicinal fungi and their diseases - methods of isolation, diagnosis and treatment.
Recommended books and references (scientific journals, reports...)	- Dr. Zidan Khalif Omran Al-Mamouri - Dr. Karima Amin Hussein Al-Khafaji
Electronic References, Websites	Electronic references, Internet sites

Ministry of Higher Education and Scientific Research
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2025

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Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .....Tikrit university .....
Faculty/Institute: .....College of science .....
Scientific Department: .....Biology .....
Academic or Professional Program Name:... Bachelor of Biology...
Final Certificate Name: ..... Bachelor of Biology....
Academic System: ……**Semesters** ……
Description Preparation Date: 5/10/2024
File Completion Date: 2025/02/14

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. Program Vision

Creating a distinguished scientific base for basic sciences that meets the requirements of society and industrial institutions and fills their needs, so that the college becomes unique with a distinguished scientific personality to achieve academic standards and reach Arab and international accreditation during the next five years.

2. Program Mission

Providing an advanced educational environment and developing a nucleus for scientific research capable of providing society with scientific competencies and trained specialized personnel through the introduction of the latest scientific technologies.

3. Program Objectives

1- Creating awareness and belief among the graduate in the civilizational mission of our nation and its pioneering and historical role in the emergence of human scientific civilization and its scientific development.
2- Preparing the specialized graduate who is familiar with the theoretical foundations of basic sciences and their field applications.
3- Providing the graduate with the scientific expertise required by the future field of work and informing him of the latest technical developments.
4- Creating a qualified cadre to engage in the field of university education in the future and capable of advancing the educational process in the various fields of science.
5- Qualifying scientific researchers who have the correct foundations for scientific research and development to be able to support the scientific and technological research movement in the country.
6- Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development.
7- Qualifying distinguished graduates who are able to engage in postgraduate studies to contribute effectively to science to solve complex scientific and technical dilemmas to develop other scientific and technical fields.
8- Preparing scientific cadres that deal rationally with science in order to serve humanity and the environment and have an effective role in global scientific activity through their contribution to international scientific conferences.
9- Paying attention to forming the basic base for specialized postgraduate studies in the relevant departments and encouraging them to do so in order to keep pace with development.
10- Upgrading the level of technical and administrative staff to support the educational process and create new capabilities commensurate with quality

requirements.
11- Diversifying sources of educational culture and linking the student's scientific concepts to the problems of the surrounding environment.

4. Program Accreditation

Does the program have program accreditation? And from which agency?
12- Achieving educational goals and outcomes that meet distinguished academic standards.
13- Developing and developing the capabilities of faculty members.
14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

no

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	8	90		Essential
College Requirements	Yes			
Department Requirements	Yes			
Summer Training	Yes			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
4		Microbial physiology	theoretical	practical

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	1- Establishing a strong and solid foundation for microbiology physiology. 2- The ability to read relevant research and scientific literature.

	3 - The student's knowledge of the most important technologies used with the principle and basis of the work of each technique of microbiology physiology. 4 - Knowledge of disciplines related to the science of microbiology, especially since it is a multidisciplinary science 5-Understanding of cellular structure, of bacteria and contents, functions of bacterial components.
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 - Learn the ability to remember B3 - Learn the ability to relate and deduce
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	1-Powerpoint 2- PDF 3- Word 4- Educational videos

9. Teaching and Learning Strategies

1. Understand students to the basics of microbiology physiology.
2. Knowledge of disciplines related to microbiology, especially since it is a multidisciplinary science.
3. The student's knowledge of the most important applications of microbiology physiology in biology.
4. Familiarity with the basic laboratory techniques of microbiology physiology.
5. The student's knowledge of the future of microbiology physiology.
6. The student's knowledge of the most important technologies used with the principle and basis of the work of each technique of microbiology physiology and Analyze microbial techniques: Familiarize yourself with laboratory techniques commonly used in microbial research.
7. Develop critical thinking and problem-solving skills: Apply physiology of bacterial structure principles to analyze and solve complex problems, evaluate scientific literature, and think critically about microbial concepts and experimental design.

10. Evaluation methods

Weekly, monthly, daily exams and the end-of-semester exam.

11.Faculty

Faculty Members						
Academic Rank	**Specialization**		**Special Requirements/Skills (if applicable)**		**Number of the teaching staff**	
	General	**Special**			**Staff**	**Lecturer**
Assistant Prof .Reyam faris saleh	Biology	Medical microbiology			/	

Professional Development
Mentoring new faculty members
Orienting new faculty members.
Professional development of faculty members
Professional development for faculty members.

12.**Acceptance Criterion**

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.**The most important sources of information about the program**

- Joanne Willey, Linda Sherwood, Christopher J. Woolverton.(2011). Prescott's Microbiology 8th Edition . McGraw Hill.
-
- *Essentials of* MEDICAL MICROBIOLOGY,Anand janagond,(2016). Jaypee Brothers Medical Publishers

14.Program Development Plan

Updating curricula according to recent scientific discoveries.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024/2025		Microbial physiology	Basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Pathological analysis
2. Course Code:
3. Semester / Year:
4/8
4. Description Preparation Date:
14/ 02/ 2025
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours per semester
7. Course administrator's name (mention all, if more than one name)
Name: Reyam.F.Saleh Email: riyamf@tu.edu.iq
8. Course Objectives

8. Understand students to the basics microbiology physiology. 9. Knowledge of disciplines related microbiology, especially since it i multidisciplinary science. 10. The student's knowledge the most important applications microbiology physiology in biology 11. Familiarity with the ba laboratory techniques microbiology physiology. 12. The student's knowledge of t future of microbiology physiology. 13. The student's knowledge of t most important technologies us with the principle and basis of t work of each technique microbiology physiology and Analy microbial techniques: Familiar yourself with laboratory techniqu commonly used in microb	• ..... • ..... • .....

research. 14. Develop critical thinking a problem-solving skills: Ap physiology of bacterial structu principles to analyze and so complex problems, evaluate scient literature, and think critically abo microbial concepts and experimer design.	

9. Teaching and Learning Strategies

Strategy	1- Educational strategy, collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2 3 4 5 6 7 8 9 10 11 12 13 14	2	1- Providing students with analysis skills. 2- Informing students about the most important mode sources in the field of microbia physiology	microbial physiology	1-Learn the ability to understand and assimila 2- Learn the ability to remember 3- Learn t ability connect a deduce	Weekly, monthly, da written a end-of-semester exams.

11.Course Evaluation

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12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	د. مها روؤف السعد. 1980.مبادئ فسلجة الاحياء المجهرية دار الكتب للطباعة والنشر .جامعة الموصل

Main references (sources)	Joanne Willey, Linda Sherwo Christopher J. Woolverton.(201 Prescott's Microbiology 8th Editio McGraw Hill.
Recommended books and references (scientific journals, reports...)	MEDICAL *Essentials of* - MICROBIOLOGY,Anand janagond,(2016). Jaypee Brothers Medical Publishers
Electronic References, Websites	https://www.researchgate.net/

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2025

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Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .... Tikrit.....
Faculty/Institute: .....Science.....
Scientific Department: .... Biology.....
Academic or Professional Program Name: ...Bachelor in biology.....
Final Certificate Name: .... Bachelor in Microbiology.....
Academic System: …Semester……
Description Preparation Date: 13/3/2025
File Completion Date: 13/3/2025

Signature:
Head of Department Name:

Date:

Signature:
Scientific Associate Name:

Date:

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. **Program Vision**
Program vision is written here as stated in the university's catalogue and website.

2. Program Mission

Program mission is written here as stated in the university's catalogue and website.

3. Program Objectives

General statements describing what the program or institution intends to achieve.

4. Program Accreditation

Does the program have program accreditation? And from which agency?

5. Other external influences

Is there a sponsor for the program?

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements		**75**		
College Requirements				
Department Requirements				
Summer Training	**yes**			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
2024-2-24, third		**Bacterial toxins**	**theoretical**	**practical**
			2	**3**

8. Expected learning outcomes of the program

Knowledge	
Acquaintance the student on the importance of bacterial toxins	Learning Outcomes Statement 1

Skills	
Expansion the knowledge in bacterial toxins	Learning Outcomes Statement 2
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Development of student ideas	Learning Outcomes Statement 4
Learning Outcomes 5	Learning Outcomes Statement 5

9. Teaching and Learning Strategies

Explain the types of bacterial toxins

10. Evaluation methods

Daily, weekly, monthly, and final semester examinations

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Assistance prof.	Biology	Microbiology			staff	

Professional Development

Mentoring new faculty members

Briefly describes the process used to mentor new, visiting, full-time, and part-time faculty at the institution and department level.

Professional development of faculty members

Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

12.Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.The most important sources of information about the program

Willy, M. J.; Sherwood, M.L.; Woolverton, J. C. (2019). Prescott's MICROBIOLOGY. Ninth Edition. McGraw Hill.

14.Program Development Plan
Study the importance of bacterial toxin on the health society

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024-2025/third		Bacterial toxins	Basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:					
Bacterial toxin					
2. Course Code:					
3. Semester / Year:					
semester					
4. Description Preparation Date:					
13/3/2025					
5. Available Attendance Forms:					
Attendance only					
6. Number of Credit Hours (Total) / Number of Units (Total)					
75 hr. in semester, 5 hr. in week					
7. Course administrator's name (mention all, if more than one name)					
Name: Assit.prof. Waqas Sadi Mahmood Email: w-s.mahmood@tu.edu.iq					
8. Course Objectives					
1-aquestion the student the ability to diagnosis of bacte toxins			• ..... • ..... •		
9. Teaching and Learning Strategies					
Strategy					
10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1 2 3 4 5 6 7 8 9 10	5hr 5hr 5hr 5hr 5hr 5hr 5hr 5hr 5hr 5hr	**1-aquestion the student th ability to diagnosis of bacterial toxins**	Bact ial toxi	Ex air the typ of ba ria tox s	Dail wee , mon y, a final sem er exa natio

11 12 13 14 15	5hr 5hr 5hr 5hr 5hr				

11.Course Evaluation	
35-degree theoretical exam. And 15-degree practical exam., 50-degree final exam.	
12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	**Willy, M. J.; Sherwood, M.L.; Woolverton, J. C. (2019). Prescott's MICROBIOLOGY. Ninth Edition. McGraw Hill.**
Recommended books and references (scientific journals, reports...)	**Microbiology (Tortora). 20120. Encyclopedia of Microbiology. 2019.** **The desk of encyclopedia of Microbiology. 2017.**
Electronic References, Websites	Virtual library

Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2025

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In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine

the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .... Tikrit.....
Faculty/Institute: .....Science.....
Scientific Department: .... Biology.....
Academic or Professional Program Name: ...Bachelor in biology.....
Final Certificate Name: .... Bachelor in Microbiology.....
Academic System: …Semester……
Description Preparation Date: 13/3/2025
File Completion Date: 13/3/2025

Signature:
Head of Department Name:

Date:

Signature:
Scientific Associate Name:

Date:

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. **Program Vision**
Program vision is written here as stated in the university's catalogue and website.

2. Program Mission

Program mission is written here as stated in the university's catalogue and website.

3. Program Objectives

General statements describing what the program or institution intends to achieve.

4. Program Accreditation

Does the program have program accreditation? And from which agency?

5. Other external influences

Is there a sponsor for the program?

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements		**75**		
College Requirements				
Department Requirements				
Summer Training	**yes**			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
2024-2-24, forth		**Virology**	**theoretical**	**practical**
			2	**3**

8. Expected learning outcomes of the program

Knowledge	
Acquaintance the student on the importance of viruses	Learning Outcomes Statement 1

Skills	
Expansion the knowledge in viruses	Learning Outcomes Statement 2
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Development of student ideas	Learning Outcomes Statement 4
Learning Outcomes 5	Learning Outcomes Statement 5

9. Teaching and Learning Strategies

Explain the types of viruses

10. Evaluation methods

Daily, weekly, monthly, and final semester examinations

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Assistance prof.	Biology	Microbiology			staff	

Professional Development

Mentoring new faculty members

Briefly describes the process used to mentor new, visiting, full-time, and part-time faculty at the institution and department level.

Professional development of faculty members

Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

12.Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.The most important sources of information about the program

Willy, M. J.; Sherwood, M.L.; Woolverton, J. C. (2019). Prescott's MICROBIOLOGY. Ninth Edition. McGraw Hill.

14.Program Development Plan
Study the importance of viruses on the health society

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024-2025/third		Virology	Basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Virology
2. Course Code:
3. Semester / Year:
semester
4. Description Preparation Date:
13/3/2025
5. Available Attendance Forms:
Attendance only
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hr. in semester, 5 hr. in week
7. Course administrator's name (mention all, if more than one name)
Name: Assit.prof. Waqas Sadi Mahmood Email: w-s.mahmood@tu.edu.iq
8. Course Objectives

1-aquestion the student the ability to diagnosis of viruses	• ..... • ..... • .....

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5hr	**1-aquestion the student th ability to diagnosis of viru**	Virgy	Expla the types viruse	Dy, wkl mth ar fi ses
2	5hr				
3	5hr				
4	5hr				
5	5hr				
6	5hr				
7	5hr				
8	5hr				
9	5hr				
10	5hr				

11 12 13 14 15	5hr 5hr 5hr 5hr 5hr				ex m at ns

11.Course Evaluation	
35-degree theoretical exam. And 15-degree practical exam., 50-degree final exam.	
12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	**Willy, M. J.; Sherwood, M.L.; Woolverton, J. C. (2019). Prescott's MICROBIOLOGY. Ninth Edition. McGraw Hill.**
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Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .....Tikrit university .....
Faculty/Institute: .....College of science .....
Scientific Department: .....Biology .....
Academic or Professional Program Name:... Bachelor of Biology...
Final Certificate Name: ..... Bachelor of Biology....
Academic System: ……**Semesters** ……
Description Preparation Date: 5/10/2024
File Completion Date: 2025/03/14

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. **Program Vision**
Creating a distinguished scientific base for basic sciences that meets the requirements of society and industrial institutions and fills their needs, so that the college becomes unique with a distinguished scientific personality to achieve academic standards and reach Arab and international accreditation during the next five years.

2. **Program Mission**
Providing an advanced educational environment and developing a nucleus for scientific research capable of providing society with scientific competencies and trained specialized personnel through the introduction of the latest scientific technologies.

3. **Program Objectives**
1- Creating awareness and belief among the graduate in the civilizational mission of our nation and its pioneering and historical role in the emergence of human scientific civilization and its scientific development. 2- Preparing the specialized graduate who is familiar with the theoretical foundations of basic sciences and their field applications. 3- Providing the graduate with the scientific expertise required by the future field of work and informing him of the latest technical developments. 4- Creating a qualified cadre to engage in the field of university education in the future and capable of advancing the educational process in the various fields of science. 5- Qualifying scientific researchers who have the correct foundations for scientific research and development to be able to support the scientific and technological research movement in the country.

6- Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development.
7- Qualifying distinguished graduates who are able to engage in postgraduate studies to contribute effectively to science to solve complex scientific and technical dilemmas to develop other scientific and technical fields.
8- Preparing scientific cadres that deal rationally with science in order to serve humanity and the environment and have an effective role in global scientific activity through their contribution to international scientific conferences.
9- Paying attention to forming the basic base for specialized postgraduate studies in the relevant departments and encouraging them to do so in order to keep pace with development.
10- Upgrading the level of technical and administrative staff to support the educational process and create new capabilities commensurate with quality requirements.
11- Diversifying sources of educational culture and linking the student's scientific concepts to the problems of the surrounding environment.

4. Program Accreditation

Does the program have program accreditation? And from which agency?
12- Achieving educational goals and outcomes that meet distinguished academic standards.
13- Developing and developing the capabilities of faculty members.
14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

no

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	**8**	**90**		**Essential**
College Requirements	**Yes**			
Department Requirements	**Yes**			
Summer Training	**Yes**			

Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
4		**Histology**	**theoretical**	**practical**

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	A1- To create an appropriate environment that promotes learning and growth and imparts the ability to work with multidisciplinary groups in professional, health and research organizations A2- To expand and deepen their abilities in recognized the tissue and cells A3- Introducing the student to the basic principles related to the science of histology
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 - Learn the ability to remember B3 - Learn the ability to relate and deduce
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	1-Powerpoint 2- PDF 3- Word 4- Educational videos 5- text book

9. Teaching and Learning Strategies

At the end of the year, the student will be familiar with the following:
1- Introducing the student to the basic principles related to histology
2- - The teaching of this course aims to cover topics in theoretical foundations in histology
3 - The student gets to know the natural forms of tissues and cell in animals and human histology
4- Giving the student an expanded and modern idea about the science of histology

10. Evaluation methods

Weekly, monthly, daily exams and the end-of-semester exam.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Prof.	Biology	Histology and embryology			/	

Professional Development

Mentoring new faculty members

Orienting new faculty members.

Professional development of faculty members

Professional development for faculty members.

12.Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.The most important sources of information about the program

- Text book of histology part 1 kuakib abdulkader almukhtar et al.
- Junqueira s basic histology text and atlas 16th

14.Program Development Plan

Updating curricula according to recent scientific discoveries.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024/2025		Histology	Basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Histology
2. Course Code:
3. Semester / Year:
4/8
4. Description Preparation Date:
14/ 03/ 2025
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours per semester
7. Course administrator's name (mention all, if more than one name)
Name: Muna Salah Rashid Email: muna.salah@tu.edu.iq
8. Course Objectives

At the end of the year, the student will be familiar wit the following: **1- Introducing the student to the basic principles relat to Histology** **2- - The teaching of this course aims to cover topics in theoretical foundations that include the cells and tissu types and function of it** **3 - The student gets to know the natural forms Histolo** **4- Giving the student an expanded and modern idea ab the science of Histology**	• ..... • ..... • .....

9. Teaching and Learning Strategies

Strategy	1- Educational strategy, collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2 3 4	2	1- Providing students with analysis skills.	Histology	1-Learn the ability to understand and assimila	Weekly, monthly, daily, writt and end-

5 6 7 8 9 10 11 12 13 14 15		2- Informing students about the most important modern source in the field of Histology .		2- Learn the ability to remember 3- Learn t ability connect a deduce	semester exams.

11.Course Evaluation	
The distribution is as follows: 25 marks for monthly and daily exams for the semester. 50 marks for final exams	
12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Text book of Histology
Main references (sources)	- Junqueira s basic histolo text and atlas 16th
Recommended books and references (scientific journals, reports...)	Current biology journal
Electronic References, Websites	https://www.researchgate.net/ pumped ncbi

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Faculty/Institute: ..... College of Sciences.....
Scientific Department: .....Biology.....
Academic or Professional Program Name: .....Bachelor of biology.....
Final Certificate Name: ..... Bachelor of biology...
Academic System.....Semesters…
Description Preparation Date: 5/10/2024
File Completion Date: 14/2/2025

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. Program Vision

Program vision is written here as stated in the university's catalogue and website.

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3- Providing the graduate with the scientific expertise required by the future field of work and informing him of the latest technical developments.
4- Creating a qualified cadre to engage in the field of university education in the future and capable of advancing the educational process in the various fields of science.
5- Qualifying scientific researchers who have the correct foundations for scientific research and development to be able to support the scientific and technological research movement in the country.
6- Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development.
7- Qualifying distinguished graduates who are able to engage in postgraduate studies to contribute effectively to science to solve complex scientific and technical dilemmas to develop other scientific and technical fields.
8- Preparing scientific cadres that deal rationally with science in order to serve humanity and the environment and have an effective role in global scientific activity through their contribution to international scientific conferences.
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10- Upgrading the level of technical and administrative staff to support the educational process and create new capabilities commensurate with quality requirements.
11- Diversifying sources of educational culture and linking the student’s scientific concepts to the problems of the surrounding environment.

4. Program Accreditation

Does the program have program accreditation? And from which agency? Does the program have program accreditation? And from which agency?
12- Achieving educational goals and outcomes that meet distinguished academic standards.
13- Developing and developing the capabilities of faculty members.
14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

no

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	**8**	**90**		**Eessential**
College Requirements	**Yes**			
Department Requirements	**yes**			
Summer Training	**yes**			
Other	**yes**			

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
4		**invertebrate**	**theoretical**	**practical**

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	A1- To create an appropriate environment that promotes learning and growth and imparts the ability to work with multidisciplinary groups in professional, health and research organizations A2- To expand and deepen their abilities in analytical and experimental research methods, data analysis, and drawing relevant conclusions for scientific writing and presentation. A3- Introducing the student to the basic principles related to the

	science of pathological analysis and everything related to it.
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 - Learn the ability to remember B3 - Learn the ability to relate and deduce
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	1-Powerpoint 2- PDF 3- Word 4- Educational videos
Learning Outcomes 5	Learning Outcomes Statement 5

9. Teaching and Learning Strategies

At the end of the year, the student will be familiar with the following:
1- Introducing the student to the basic principles related to invertebrate science
2- - The teaching of this course aims to cover topics in the theoretical foundations that aim at methods of classifying invertebrate organisms.
3- Giving the student an expanded idea and conversation about the science and diversity of invertebrates in different environments, land and water.

10. Evaluation methods

Weekly, monthly, daily exams and the end-of-semester exam.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Assistant prof	biology	invertebrates				

Professional Development

Mentoring new faculty members
Orienting new faculty members.
Professional development of faculty members
Professional development for faculty members.

12.Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central

admission or others)

13.**The most important sources of information about the program**
-Moore, J. (2001). An introduction to the invertebrates. Cambridge University Press. **-Roberts, L. S. ; Janavy, J. JR. and Nadlers S. (2013). Gerald D schmidt and larry S. Robents" Foundations of Parasitolegy, edh., McGrwo-Hill comPanies, Inc ., United states : 670 PP.**

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Updating curricula according to recent scientific discoveries.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024-2025		Invertebrate	basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Invertebrate
2. Course Code:
3. Semester / Year:
4/8
4. Description Preparation Date:
14/2/2025
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hour per semester
7. Course administrator's name (mention all, if more than one name)
Name: Assistant prof .Ali Mohammed Abed Email: a-m.abdnasir@tu.edu.iq
8. Course Objectives

At the end of the semester, the student w be familiar with the following matters: 1. Introducing the student to the basic principles related to the invertebrate science curriculum 2. Teaching this course aims to provide t student with sufficient knowledge abo the general characteristics of invertebr animal groups and to identify their m prominent characteristics, advantag benefits and harms.	• ..... • ..... • .....

9. Teaching and Learning Strategies	
Strategy	1- Educational strategy, collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure

Week	Hours	Required	Unit or subject name	Learning	Evaluation

		Learning Outcomes		method	method
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		Providing students with analysis skills. 2- Informing students about t most important modern sources the field theoretica invertebr science	invertebrates	1-Learn th ability to understand and assimi 2- Learn t ability to remember 3- Learn ability connect deduce	Weekly, monthly daily, written and e of-semeste exams

11.Course Evaluation	
The distribution is as follows: 50 marks for monthly and daily exams for the semester. 50 marks for final exams	
12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Roberts, L.S. and Janovy, J. (2013). Foundation of parasitology
Main references (sources)	Roberts, L.S. and Janovy, J. (2013). Foundation of parasitology
Recommended books and references (scientific journals, reports...)	**Moore, J. (2001). An introduction to the invertebrates. Cambridge University Press**.
Electronic References, Websites	https://www.researchgate.net/ https://scholar.google.com/schhp?hl=

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Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

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Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine

the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .....Tikrit university .....
Faculty/Institute: .....College of science .....
Scientific Department: .....Biology .....
Academic or Professional Program Name:... Biology
Final Certificate Name: ..... Biology....
Academic System: ……**Semesters** ……
Description Preparation Date: 5/10/2024
File Completion Date: 2025/02/14

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. Program Vision

Creating a distinguished scientific base for basic sciences that meets the requirements of society and industrial institutions and fills their needs, so that the college becomes unique with a distinguished scientific personality to achieve academic standards and reach Arab and international accreditation during the next five years.

2. Program Mission

Providing an advanced educational environment and developing a nucleus for scientific research capable of providing society with scientific competencies and trained specialized personnel through the introduction of the latest scientific technologies.

3. Program Objectives

1- Creating awareness and belief among the graduate in the civilizational mission of our nation and its pioneering and historical role in the emergence of human scientific civilization and its scientific development.
2- Preparing the specialized graduate who is familiar with the theoretical foundations of basic sciences and their field applications.
3- Providing the graduate with the scientific expertise required by the future field of work and informing him of the latest technical developments.
4- Creating a qualified cadre to engage in the field of university education in the future and capable of advancing the educational process in the various fields of science.
5- Qualifying scientific researchers who have the correct foundations for scientific research and development to be able to support the scientific and technological research movement in the country.
6- Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development.
7- Qualifying distinguished graduates who are able to engage in postgraduate studies to contribute effectively to science to solve complex scientific and technical dilemmas to develop other scientific and technical fields.
8- Preparing scientific cadres that deal rationally with science in order to serve humanity and the environment and have an effective role in global scientific activity through their contribution to international scientific conferences.
9- Paying attention to forming the basic base for specialized postgraduate studies in the relevant departments and encouraging them to do so in order to keep pace with development.

10- Upgrading the level of technical and administrative staff to support the educational process and create new capabilities commensurate with quality requirements.
11- Diversifying sources of educational culture and linking the student's scientific concepts to the problems of the surrounding environment.

4. Program Accreditation

Does the program have program accreditation? And from which agency?
12- Achieving educational goals and outcomes that meet distinguished academic standards.
13- Developing and developing the capabilities of faculty members.
14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

no

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	8	90		Essential
College Requirements	Yes			
Department Requirements	Yes			
Summer Training	Yes			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
4		Pathological analysis	theoretical	practical

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	Knowledge and understanding 1- Explain the reasons for air pollution 2- It defines the damage caused by air pollution 3- Explanation of how the phenomenon of global warming and razor 4- Explain the damage caused by the ozone hole
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 - Learn the ability to remember B3 - Learn the ability to relate and deduce
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	1-Powerpoint 2- PDF 3- Word 4- Educational videos

9. Teaching and Learning Strategies

At the end of the year, the student is familiar with the following matters:
1- That the student be aware of the pollution.
2- That the student be aware of the ecosystem.
3- The student must be aware of the types of pollutants and their impact on the environment in general and the human being in particular.

10. Evaluation methods

Weekly, monthly, daily exams and the end-of-semester exam.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Prof	Biology	pollution			/	

Professional Development

Mentoring new faculty members
Orienting new faculty members.
Professional development of faculty members
Professional development for faculty members.

12.**Acceptance Criterion**
(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.**The most important sources of information about the program**
- Books and research published by Iraqi universities and universities in discreet- - Water pollution written by Prof. Mr. Ahmed Al -Khatib / Alexandria University / Egypt - The electronic virtual library, discreet references from the Internet

14.Program Development Plan
Updating curricula according to recent scientific discoveries.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024/2025		Pollution	Basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Pollution
2. Course Code:
3. Semester / Year:
4/8
4. Description Preparation Date:
14/ 02/ 2025
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours per semester
7. Course administrator's name (mention all, if more than one name)
Name: Ibrahim Omar Saeed Email:dr.ibrahim1977@tu.edu.iq
8. Course Objectives

At the end of the year, the student will be familiar wit the following: **The student's ability to identify the types of environme pollution- air pollution, water pollution, soil polluti and know the most important pollutants, their causes methods of treatment or reduce them, and to identify changes that occur when developing vari diseases.about the science of pathological analyzes and normal and abnormal ranges, in addition to the chan that occur when infected with various diseases.**	• ..... • ..... • .....

9. Teaching and Learning Strategies	
Strategy	- At the end of the year, the student is familiar with the following matters: 1- That the student be know of the pollution. 2- That the student be aware of the ecosystem. 3- The student must be aware of the types of pollutants and th impact on the environment in general and the human being particular.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2	2		Pollution	1-Learn the ability to	Weekly, monthly,

3 4 5 6 7 8 9 10 11 12 13 14 15		1- Providing students with analysis skills. 2- Informing students about the most important modern source in the field of pathological analyses.		understand and assimila 2- Learn the ability to remember 3- Learn t ability connect a deduce	daily, writt and end-semester exams.

11.Course Evaluation	
The distribution is as follows: 25 marks for monthly and daily exams for the semester. 50 marks for final exams	
12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	No found
Main references (sources)	- Books and research published Iraqi universities and internatio universities
Recommended books and references (scientific journals, reports...)	Water pollution written by Prof. Mr. Ahmed Al -Khatib / Alexand University / Egypt
Electronic References, Websites	https://www.researchgate.net/

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Scientific Department: .... of biology.....
Academic or Professional Program Name: .... department of biology.....
Final Certificate Name: Bachelor's degree in department Sciences.....
Academic System: … **courses** ……
Description Preparation Date: 5/10/2023
File Completion Date: 16/03/2024

Signature: Iman Adoan
Head of Department Name:

Date:

Signature: Firas Fars raga
Scientific Associate Name:

Date:

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. Program Vision

Forming a sound scientific foundation on which the student can rely in the future from a practical standpoint and linking topics correctly with the requirements of life when he engages in the labor market.

2. Program Mission

Providing an appropriate educational environment for students that ensures the delivery of scientific information in a manner that keeps pace with current modernity, in addition to expanding the information base by enriching the student with external information in addition to the specific curriculum.

3. Program Objectives

-Create an appropriate environment that promotes learning and growth and imparts the ability to work with multidisciplinary groups in professional, health and research organizations.
2-To expand and deepen their abilities in analytical and experimental research methods, data analysis, and drawing relevant conclusions for scientific writing and presentation.
3- Introducing the student to the basic principles of life's compounds and their relationship with each other

4. Program Accreditation

nothing

5. Other external influences

nothing

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	90	3		Basic course
College Requirements	yes			
Department Requirements	yes			
Summer Training	Existing			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description				
Year/Level	**Course Code**	**Course Name**	**Credit Hours**	
2025-2024/second		**Biochemistry**	**particle**	**theory**

8. Expected learning outcomes of the program	
Knowledge	
Understanding life molecules Knowing	the components of life molecules
Skills	
-Training skills on laboratory	equipment Conducting laboratory tests
visiting scientific sites	related to the course topics Value
Ethics	
Developing students' abilities to share ideas	Understanding, analysis and conclusion
-Power point 2-PDF 3-Word 4- Conducting laboratory analyzes and experiments	Share the spirit of teamwork

9. Teaching and Learning Strategies

1- Introducing the student to what is the basic structure of life's components and chemical and biological compositions. 2- Building a basic and correct basis in laboratory work, including methods for detecting carbohydrates, proteins, etc. 3- Knowing healthy food molecules and how to deal with them according to the body's need, and avoiding foods that may lead to disease.

10. Evaluation methods

Weekly, monthly, daily exams and the end of the year exam.

11.Faculty

Faculty Members

Academic Rank	**Specialization**		**Special Requirements/Skills (if applicable)**	**Number of the teaching staff**	
	General	**Special**		**Staff**	**Lecturer**

Doctor teacher		**Special**			Staff	

Professional Development
Mentoring new faculty members
Professional development of faculty members

12.**Acceptance Criterion**

13.**The most important sources of information about the program**

14.Program Development Plan
Adding advanced techniques related to advanced analyses

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024-2025		Biochemistry	Basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name: Bio chemistry

2. Course Code: Bio chemistry

3. Semester / Year: terminal

4. Description Preparation Date: 2024\3\16

5. Available Attendance Forms: My presence only

6. Number of Credit Hours (Total) / Number of Units (Total)

hour annually. 8 hours per week

7. Course administrator's name (mention all, if more than one name)

Name: hiba hamza Rasheed
Email: hibarasheed@tu.edu.iq

8. Course Objectives

Course Objectives	• . At the end of the semester, the student will be familiar with tl following matters • 1-Introducing the student to the basic life molecules related to biochemistry • 2- The teaching of this course aims to cover topics in theoretic foundations that include life compounds from the chemical an biological aspects. • ● 3- Identify the relationships between these compounds and t biological environment of living organisms.

9. Teaching and Learning Strategies

Strategy	1- Setting goals and objectives in order to reach the desired results objectives. 2- Developing a scientific plan within a specific time to te students the practical aspect and its connection to work in public laborator

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	2 hour	-Carbohydrates -Monosaccharide		PDF Power	Weekly,
2	2 hour	-Category Calculate a numb -Isomers -Diabetic closure		point PDF	monthly, daily,
3	2 hour			Power	written
4	2 hour	-Disaccharides -oligosaccharides		point	exams, a
5	2 hour	-Multiple sugars -Classification		PDF Power	the end-o
6	2 hour	-Fats -Its types		point	year exa
7	2 hour	- Neutral fats			
8	2 hour	Phosphorylated lipids - spongy		PDF Power point	
9	2 hour	lipids -Cereaceae			
10	2 hour	-Steroids		PDF Power	
11	2 hour	-amino acids -Classification		point	
12	2 hour	-Peptides			
13	2 hour	Semester exam		PDF Power point	
14					
15	2 hour	-Proteins -Classification			
16	2 hour	-Structures of proteins		PDF Power	
17	2 hour	-Nucleic acids -Installation -Importance		point	
18	2 hour			PDF Power point	

19	2 hour			PDF Power point PDF Power point	

11.Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports.....etc	
12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Biochemistry / Prof. Dr. Khawla Ahmed Al-Flih
Main references (sources)	Biochemistry / Prof. Khawla Ahmed Al-Flih
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

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Scientific Supervision and Scientific Evaluation Apparatus
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Faculty/Institute: .. the sciences.....
Scientific Department: .... of biology.....
Academic or Professional Program Name: .... department of biology.....
Final Certificate Name: Bachelor's degree in department Sciences.....
Academic System: … **courses** ……
Description Preparation Date: 5/10/2024
File Completion Date: 16/03/2025

Signature: Iman Adoan	**Signature: Firas Fars raga**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

15.**Program Vision**

Forming a sound scientific foundation on which the student can rely in the future from a practical standpoint and linking topics correctly with the requirements of life when he engages in the labor market.

16.**Program Mission**

This academic program description provides a necessary summary of the most important characteristics of the program and the learning outcomes that the student is expected to achieve, demonstrating whether he has made the most of the available opportunities. It is accompanied by a description of each course within the program.

17.**Program Objectives**

1-Create an appropriate environment that enhances learning and growth and imparts the ability to work with multidisciplinary groups in professional, health, and research organizations.

2-To expand and deepen their abilities in analytical and experimental research methods, data analysis, and drawing relevant conclusions for scientific writing and presentation.

3- Introducing the student to the basic principles of life's compounds and their relationship with each other

18.**Program Accreditation**

nothing

19.**Other external influences**

nothing

20.**Program Structure**

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*

Institution Requirements	90	3		Basic course
College Requirements	yes			
Department Requirements	yes			
Summer Training	Existing			
Other				

* This can include notes whether the course is basic or optional.

21. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
2025-2024/second	**Clinical chemistry**		**particle**	**theory**

22. Expected learning outcomes of the program

Knowledge	
1- Understanding the metabolic processes that occur within the body 2- Knowing the interactions that affect	it 3- Understanding the metabolic processes that occur within the body 4- Knowing the interactions that affect it
Skills	
- Knowledge of the metabolic processes that occur in the body A2- Knowledge of diseases associated with metabolic processes	A3- Understanding of the relationship between diseases and metabolic reactions - Knowledge of the metabolic processes that occur in the body A2- Knowledge of diseases associated with metabolic processes A3- Understanding of the relationship between diseases and metabolic reactions
Ethics	
-To expand and deepen their abilities in analytical and experimental research methods, data analysis, and drawing relevant conclusions.	1-To create an appropriate environment that promotes learning and growth and imparts the ability to work with multidisciplinary groups in professional, health and research organizations.

23. Teaching and Learning Strategies

24. Evaluation methods

Weekly, monthly, daily exams and the end of the year exam.

25.Faculty						
Faculty Members						
Academic Rank	**Specialization**		**Special Requirements/Skills (if applicable)**		**Number of the teaching staff**	
	General	**Special**			**Staff**	**Lecturer**
Doctor teacher		**Special**			Staff	

Professional Development
Mentoring new faculty members
Professional development of faculty members

26.**Acceptance Criterion**

27.**The most important sources of information about the program**

28.Program Development Plan
Adding advanced techniques related to advanced analyses

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024-2025		Clinic chemistry	Basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

13.Course Name: clinical chemistry
14.Course Code: clinical chemistry
15.Semester / Year: terminal
16.Description Preparation Date: 2025\3\16
17.Available Attendance Forms: My presence only
18.Number of Credit Hours (Total) / Number of Units (Total)
hour annually. 8 hours per week
19. Course administrator's name (mention all, if more than one name)
Name: hiba hamza Rasheed Email: hibarasheed@tu.edu.iq
20.Course Objectives

Course Objectives	•

21.Teaching and Learning Strategies

Strategy	

22. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 hour	Introduction to metabolism -		PDF Power	Weekly,
2	2 hour	Demolitions and construction – Carbohydrate metabolism		point	monthly, daily,
3	2 hour			PDF Power point	written
4	2 hour	Digestion of - carbohydrates -			exams, an
5	2 hour	Carbohydrate absorption		PDF Power	the end-o
6	2 hour	Anaerobic - glycolysis		point	year exam

7	2 hour	alcoholic - fermentation		PDF Power point	
8	2 hour	- Aerobic glycolysis			
9	2 hour	Krebs cycle-			
10	2 hour	The respiratory - chain -The pentose		PDF Power point	
11	2 hour	phosphate pathway -The			
12	2 hour	glyoxylate cycle Glycogenesis-		PDF Power point	
13	2 hour	Glycogenolysis- Gluconeogenesis-			
14	2 hour	Energy calculations			
15		foraerobic and			
16	2 hour	anaerobicglycolysis processes		PDF Power point	
17	2 hour	Introduction and- definition ofmetabolic disorders and theirprocesses			
18	2 hour	Glycogen Storage Diseases Symptoms Diagnosis -Treatment		PDF Power point	
19	2 hour	GALACTOSEMIA- Symptoms- Diagnosis- -Treatment		PDF Power point	

23.Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports..... etc	
24.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Sources from the Internet

Main references (sources)	Al-Wajeez in Biochemistry Prof. Dr. Sami Abdel Mahdi Muzaffar
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

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Description Preparation Date: 5/10/2024
File Completion Date: 2025/03/15

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Dr: Ayman Adwan Abd	**Dr: Firas Faris Rija**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. **Program Vision**
Creating a distinguished scientific base for basic sciences that meets the requirements of society and industrial institutions and fills their needs, so that the college becomes unique with a distinguished scientific personality to achieve academic standards and reach Arab and international accreditation during the next five years.

2. **Program Mission**
Providing an advanced educational environment and developing a nucleus for scientific research capable of providing society with scientific competencies and trained specialized personnel through the introduction of the latest scientific technologies.

3. **Program Objectives**
1- Creating awareness and belief among the graduate in the civilizational mission of our nation and its pioneering and historical role in the emergence of human scientific civilization and its scientific development. 2- Preparing the specialized graduate who is familiar with the theoretical foundations of basic sciences and their field applications. 3- Providing the graduate with the scientific expertise required by the future field of work and informing him of the latest technical developments. 4- Creating a qualified cadre to engage in the field of university education in the future and capable of advancing the educational process in the various fields of science. 5- Qualifying scientific researchers who have the correct foundations for scientific research and development to be able to support the scientific and technological research movement in the country. 6- Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development.

7- Qualifying distinguished graduates who are able to engage in postgraduate studies to contribute effectively to science to solve complex scientific and technical dilemmas to develop other scientific and technical fields.
8- Preparing scientific cadres that deal rationally with science in order to serve humanity and the environment and have an effective role in global scientific activity through their contribution to international scientific conferences.
9- Paying attention to forming the basic base for specialized postgraduate studies in the relevant departments and encouraging them to do so in order to keep pace with development.
10- Upgrading the level of technical and administrative staff to support the educational process and create new capabilities commensurate with quality requirements.
11- Diversifying sources of educational culture and linking the student's scientific concepts to the problems of the surrounding environment.

4. Program Accreditation

Does the program have program accreditation? And from which agency?
12- Achieving educational goals and outcomes that meet distinguished academic standards.
13- Developing and developing the capabilities of faculty members.
14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

no

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	**8**	**90**		**Essential**
College Requirements	**Yes**			
Department Requirements	**Yes**			
Summer Training	**Yes**			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
fourth		**Biodiversity**	**theoretical**	**practical**
			2 hour	**3 hours**

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	A1- To create an appropriate environment that promotes learning and growth and imparts the ability to work with multidisciplinary groups in professional, health and research organizations A2- To expand and deepen their abilities in analytical and experimental research methods, data analysis, and drawing relevant conclusions for scientific writing and presentation. A3- Introducing the student to the basic principles related to the science of Biodiversity and everything related to it.
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 - Learn the ability to remember B3 - Learn the ability to relate and deduce
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	1-Powerpoint 2- PDF 3- Word 4- Educational videos

9. Teaching and Learning Strategies

At the end of the year, the student will be familiar with the following:
1- Introducing the student to the basic principles related to Biodiversity
2- - To classify the needs to develop the practical reality of biodiversity
3 - The student gets to know the natural forms

10. Evaluation methods

Weekly, monthly, daily exams and the end-of-semester exam.

11.Faculty

Faculty Members

Academic Rank	Specialization	Special Requirements/Skills (if applicable)	Number of the teaching staff

	General	Special			Staff	Lecturer
Assistant prof	Biology	Genetic			/	
Assistant lecturer	Biology	Mycology			/	

Professional Development
Mentoring new faculty members
Orienting new faculty members.
Professional development of faculty members
Professional development for faculty members.

12.Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.The most important sources of information about the program

- Books and research published in Iraqi universities and reputable international universities
- Basics of biodiversity, approved genetics books, Tikrit Journal of Pure Sciences
- The electronic virtual library, modern sources from the Internet

14.Program Development Plan

Updating curricula according to recent scientific discoveries.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2025/2024		Biodiversity	Basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Biodiversity
2. Course Code:
3. Semester / Year:
4/8
4. Description Preparation Date:
15/ 03/ 2025
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours per semester
7. Course administrator's name (mention all, if more than one name)
Name: Rafi Zidan Mikhlif Name: Noor Adnan Abduallah Email: Nyra9113@gmail.com
8. Course Objectives

At the end of the year, the student will be familiar with the following: **1- Introducing the student to the basic principles relate to biodiversity** **2- To classify the needs to develop the practical reality biodiversity** **3 - The student gets to know the natural forms**	• **.....** • **.....** • **.....**

9. Teaching and Learning Strategies	
Strategy	1- Educational strategy, collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2 3 4 5	2	1- Providing students with analysis skills.	Biodiversity	1-Learn the ability to understand and assimila	Weekly, monthly, daily, writt and end-

6 7 8 9 10 11 12 13 14 15		2- Informing students about the most important modern source in the field of Biodiversity		2- Learn the ability to remember 3- Learn t ability connect a deduce	semester exams.

11.Course Evaluation	
The distribution is as follows: 25 marks for monthly and daily exams for the semester. 50 marks for final exams	
12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	/
Main references (sources)	Books and research published in Ir universities and reputable internatio universities
Recommended books and references (scientific journals, reports...)	Basics of biodiversity, approved genet books, Tikrit Journal of Pure Sciences
Electronic References, Websites	https://www.researchgate.net/

Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2025

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

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In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

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Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must

determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .Tikrit University.....
Faculty/Institute: College of Sciences.....
Scientific Department: ..Biology Department.....
Academic or Professional Program Name: .Bachelor's.....
Final Certificate Name: Bachelor's in biology.....
Academic System:semester system ……
Description Preparation Date:14\3\2024
File Completion Date: 14\3\2025

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

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Creating a distinguished scientific base for basic sciences that meets the requirements of society and industrial institutions and fills their needs, so that the college becomes unique with a distinguished scientific personality to achieve

academic standards and reach Arab and international accreditation during the next five years.

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1. Program Objectives1

1- **Creating awareness and belief among the graduate in the cultural mission of our nation and its pioneering and historical role in the emergence of human scientific civilization and its scientific development.**

2- **Preparing a specialized graduate who is familiar with the theoretical foundations of basic sciences and their field applications.**

3- **Providing the graduate with the scientific experience required by the future field of work and informing him of the latest technical developments.**

4- **Creating a qualified cadre to engage in university education in the future and capable of advancing the educational process in the various fields of science.**

5- **Qualifying scientific researchers who have the correct foundations for scientific research and development to be able to support the scientific and technological research movement in the country.**

6- **Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development."**

7- **Preparing distinguished graduates who are able to engage in postgraduate studies to contribute effectively to science to solve complex scientific and technical dilemmas to develop other scientific and technical fields.**

8- **Preparing the scientific cadre that deals rationally with science in order to serve humanity and the environment and have an effective role in**

global scientific activity through its contribution to international scientific conferences.

9- Paying attention to forming the basic base for specialized postgraduate studies in the relevant departments and encouraging them to do so in order to keep pace with development.

10- Upgrading the level of technical and administrative staff to support the educational process and create new capabilities commensurate with quality requirements.

11- Diversifying sources of educational culture and linking the student's scientific concepts to the problems of the surrounding environment.

12- Achieving educational goals and outcomes that meet distinguished academic standards.

13- Developing and developing the capabilities of faculty members.

2. Program Accreditation

Does the program have program accreditation? And from which agency?

3. Other external influences

Is there a sponsor for the program?

4. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	90			
College Requirements	yes			
Department Requirements	yes			
Summer Training	Existing			
Other				

* This can include notes whether the course is basic or optional.

5. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
2023-2025		Biological treatment	theoretical	practical
				3 hours

6. Expected learning outcomes of the program

Knowledge	
A1 Enabling students to understand the concept of biological treatment and its benefits. A2- Introducing students to beneficial microorganisms in biological water treatment. A3- Teaching students how to dilute water samples and grow them on different agricultural media. A4- Identify the physical, chemical and biological properties of water. A5- That the student recalls the information he studied carefully and verifies it scientifically.	Learning Outcomes Statement 1
Skills	
B1 - Teaching students the importance of bacteria, their benefits and harms. B2 - Knowing the general characteristics of water and how to deal with it. B3 - Introducing students to the types of pollutants present and their role in transmitting diseases	Learning Outcomes Statement 2
	Learning Outcomes Statement 3
Ethics	
Monthly exams 2- Daily exams 3- Oral questions during the lecture time	Learning Outcomes Statement 4

4-Reports 5-Duties	
Learning Outcomes 5	Learning Outcomes Statement 5

7. Teaching and Learning Strategies

At the end of the year, the student will be familiar with the following:
1- Enabling students to obtain knowledge and understanding of the intellectual and applied framework in biological treatment.
2- Enabling students to obtain knowledge and understanding of processing requirements in accordance with international standards
3- Informing students about modern techniques in biological treatment through presenting scientific research.

8. Evaluation methods

Weekly, monthly, daily exams and the end-of-semester exam.

9. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Assistant teacher	Biology	Environment and pollution			staff	

Professional Development

Mentoring new faculty members

Briefly describes the process used to mentor new, visiting, full-time, and part-time faculty at the institution and department level.

Professional development of faculty members

Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

10. Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central

admission or others)

11.**The most important sources of information about the program**
State briefly the sources of information about the program. Prescribed methodological books Scientific sources Local websites

12.Program Development Plan
Including topics that are in line with modernity, the requirements of scientific and practical life, and what scientists have achieved on an ongoing basis, providing modern devices for biological treatment to conduct scientific experiments by students, and adopting modern technology for cognitive development and performance.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Biological Treatment
2. Course Code:
3. Semester / Year:
semester
4. Description Preparation Date:
14\3\2025
5. Available Attendance Forms:
in person
6. Number of Credit Hours (Total) / Number of Units (Total)
3 hours from each week
7. Course administrator's name (mention all, if more than one name)
Name: Assistant teacher Heba hamad mohammed Assistans teacher.Noor sabah Email: heba.h.mohammed@tu.edu.iq
8. Course Objectives

The course includes giving concepts related to foundations of biological treatment and identifying Treatment methods and study of the spread distribution of pollutants and the conditions affect them. **-Introducing the student to the general and b material in biological treatment** **-The importance of identifying import microorganisms present in water** **-Learn about the importance of beneficial bacteria their role in treating pollution** **-View water samples, conduct practical experiments, determine the extent of contamination in the sample**	• **.....** • **.....** • **.....**

9. Teaching and Learning Strategies	
Strategy	Method of giving lectures 2-Student groups 3-Practical lectures

	4-Scientific educational videos 5-Powerpoint

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2 3 4 5 6 7 8 9	3 3 hours 3hours 3hours 3hours 3hours 3hours 3hours 3hours	save to understa analysis	1-Physical treatment 2-Indication of pollution 3-TDS 4-Indication of bacterial contaminati 5-Calculatin the total number for coli bacteria 6-The total number of bacteria fecal colifor 7- Plant nutrients 8-Nitrite 9-Electrical conductivity	in person	written tests

11.Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports..... etc	
12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	- The prescribed methodological book
Main references (sources)	- Books and resear published in Iraqi universit and reputable internatio universities
Recommended books and references (scientific journals, reports...)	- Biological treatme book
Electronic References, Websites	Electronic virtual library, so references from the Internet

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2025

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Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

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Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .....Tikrit university .....
Faculty/Institute: .....College of science .....
Scientific Department: .....Biology .....
Academic or Professional Program Name:... Bachelor of Biology...
Final Certificate Name: ..... Bachelor of Biology....
Academic System: ……**Semesters** ……
Description Preparation Date: 5/10/2024
File Completion Date: 2025/02/14

Signature:
Head of Department Name:

Date:

Signature:
Scientific Associate Name:

Date:

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. Program Vision

Creating a distinguished scientific base for basic sciences that meets the requirements of society and industrial institutions and fills their needs, so that the college becomes unique with a distinguished scientific personality to achieve academic standards and reach Arab and international accreditation during the next five years.

2. Program Mission

Providing an advanced educational environment and developing a nucleus for scientific research capable of providing society with scientific competencies and trained specialized personnel through the introduction of the latest scientific technologies.

3. Program Objectives

1- Creating awareness and belief among the graduate in the civilizational mission of our nation and its pioneering and historical role in the emergence of human scientific civilization and its scientific development.
2- Preparing the specialized graduate who is familiar with the theoretical foundations of basic sciences and their field applications.
3- Providing the graduate with the scientific expertise required by the future field of work and informing him of the latest technical developments.
4- Creating a qualified cadre to engage in the field of university education in the future and capable of advancing the educational process in the various fields of science.
5- Qualifying scientific researchers who have the correct foundations for scientific research and development to be able to support the scientific and technological research movement in the country.
6- Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development.
7- Qualifying distinguished graduates who are able to engage in postgraduate studies to contribute effectively to science to solve complex scientific and technical dilemmas to develop other scientific and technical fields.
8- Preparing scientific cadres that deal rationally with science in order to serve humanity and the environment and have an effective role in global scientific activity through their contribution to international scientific conferences.
9- Paying attention to forming the basic base for specialized postgraduate studies in the relevant departments and encouraging them to do so in order to keep pace with development.

10- Upgrading the level of technical and administrative staff to support the educational process and create new capabilities commensurate with quality requirements.
11- Diversifying sources of educational culture and linking the student's scientific concepts to the problems of the surrounding environment.

4. Program Accreditation

Does the program have program accreditation? And from which agency?
12- Achieving educational goals and outcomes that meet distinguished academic standards.
13- Developing and developing the capabilities of faculty members.
14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

no

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	8	90		Essential
College Requirements	Yes			
Department Requirements	Yes			
Summer Training	Yes			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
3		Cell Biology	theoretical	practical

8. Expected learning outcomes of the program

Knowledge

Learning Outcomes 1	A1- To create an appropriate environment that promotes learning and growth and imparts the ability to work with multidisciplinary groups in professional, health and research organizations A2- To expand and deepen their abilities in analytical and experimental research methods, data analysis, and drawing relevant conclusions for scientific writing and presentation. A3- Introducing the student to the basic principles related to the science of pathological analysis and everything related to it.
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 - Learn the ability to remember B3 - Learn the ability to relate and deduce
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	1-Powerpoint 2- PDF 3- Word 4- Educational videos

9. Teaching and Learning Strategies

At the end of the year, the student will be familiar with the following:
1- Introducing the student to the basic principles related to cell biology analyses
2- - The teaching of this course aims to cover topics in theoretical foundations that include the process of mechanisms for the occurrence of pathological conditions, the disorders that occur, and the diseases resulting from these disorders.
3 - The student gets to know the natural forms and pathological conditions, as well as the student's knowledge of normal and abnormal values (pathological conditions), as well as teaching the student the pathological conditions that lead to an increase or decrease in these values.
4- Giving the student an expanded and modern idea about the science of pathological analyzes and the normal and abnormal ranges, in addition to the changes that occur when infected with various diseases.

10. Evaluation methods

Weekly, monthly, daily exams and the end-of-semester exam.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Assistant Prof	Biology	Cytogenetic			/	
Assistant Prof	Biology	Molecular genetic			/	

Professional Development
Mentoring new faculty members
Orienting new faculty members.
Professional development of faculty members
Professional development for faculty members.

12.Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.The most important sources of information about the program

- LECTURE NOTES: CELL BIOLOGY) BIOMEDICAL LABORATORY SCIENCE STUDENTS (By Dr. Callixte Yadufashije

- Cell science and genetics (Dr. Saad bin Hussein Saad Al-Qahtani)

14.Program Development Plan

Updating curricula according to recent scientific discoveries.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024/2025		Cell biology	Basic			*			*				*		

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Cell biology
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
14/ 02/ 2025
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours per semester
7. Course administrator's name (mention all, if more than one name)
Name: Hayder Mudheher Abbas Email: Hayderalmudhhir@tu.edu.iq Name: Hadeel Abdulhadi Omear Email: hadeel.omear@tu.edu.iq
8. Course Objectives

At the end of the year, the student will be familiar with the following: **1- Introducing the student to the basic principles relat to cell biology** **2- - The teaching of this course aims to cover topics in theoretical foundations that include the process of mechanisms for the occurrence of cell biology conditio the disorders that occur, and the diseases resulting fro these disorders.** **3 - The student gets to know the natural forms and pathological conditions, as well as the student's knowledge of normal and abnormal values (pathologic conditions), as well as teaching the student the pathological conditions that lead to an increase or decrease in these values.** **4- Giving the student an expanded and modern idea ab the science of pathological analyzes and the normal abnormal ranges, in addition to the changes that oc when infected with various diseases.**	• ..... • ..... • .....

9. Teaching and Learning Strategies

Strategy	1- Educational strategy, collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	2	1- Providing students with analysis skills. 2- Informing students about the most important modern source in the field of pathological analyses.	Cell biology	1-Learn the ability to understand and assimila 2- Learn the ability to remember 3- Learn t ability connect a deduce	Weekly, monthly, daily, writt and end-semester exams.

11.Course Evaluation
The distribution is as follows: 25 marks for monthly and daily exams for the semester. 50 marks for final exams

12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	- LECTURE NOTES: CELL BIOLOGY)BIOMEDICAL LABORATORY SCIENCE STUDENTS (By Dr. Callixte Yadufashije علم الخلية والوراثة (د. سعد بن - حسين سعد القحطاني)
Main references (sources)	**Molecular Biology of the Cell, 4th edition**
Recommended books and references (scientific journals, reports...)	Molecular Biology of the Cell

	By Bruce Alberts - Chancellor's Leadership Chair in Biochemistry and Biophysics for Science and Education
Electronic References, Websites	https://www.researchgate.net/

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2025

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Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must

determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .....Tikrit.....
Faculty/Institute: .....science.....
Scientific Department: ...Biology.....
Academic or Professional Program Name: .....PhD.....
Final Certificate Name: ..... PhD in Biology.....
Academic System: …**course**……
Description Preparation Date: 5/10/2025
File Completion Date: 16/3/2025

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. Program Vision

The college of Science seeks to be one of the leading higher education institutions at the University of Tikrit in the field of modern education and scientific research through its scientific, research and administrative activities, and also works to provide an integrated path for its students and professors to make them active and creative in community service.

2. Program Mission

Work on preparing and graduating leading scientific and leadership competencies in the fields of life sciences and in developing the knowledge balance in the field of scientific research to serve the local, regional and international community, as well as training and refining students' minds scientifically and cognitively, and emphasizing social values.

3. Program Objectives

1. Focusing the vision, mission and objectives of Tikrit University / College of Science, and applying the best educational practices with a focus on quality assurance and performance and enhancing them.
2. Preparing specialized cadres capable of serving the community and preparing for the preparation of future specializations.
3. Spreading the culture of diversity, writing academic research and creative scientific achievement through activities that focus on students and teachers.
4. The college seeks to conclude scientific and cultural cooperation agreements with the corresponding colleges and the corresponding departments in the various colleges to achieve the best practices in the fields of teaching, learning and translation.
5. Focusing on the educational and moral aspect of all its members and spreading the spirit of dedication, tolerance, commitment and work to serve the country.
6. Paying attention to intellectual and cultural construction through openness to the experiences of other countries in scientific fields
7. Focusing on the educational and moral aspect of the student and spreading the spirit of dedication, tolerance and commitment.

4. Program Accreditation

5. Other external influences

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution	2			Basic

Requirements				**Course**
College Requirements	**Yes,**			
Department Requirements	**Yes,**			
Summer Training				
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
2025-2025/3rd stage		**Cell biology**	**theoretical**	**Practical**
2025-2025/3rd stage		**Genetic**	**theoretical**	**Practical**

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	- Enable the student to take note of the subject of biology. - The student should understand the nature of the genetic material and its chemical composition - The student should understand the mechanisms of transmission and reproduction of genetic material.
Skills	
Learning Outcomes 2	Expanding the student's skill to work in laboratories and health institutions.
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	Developing students' abilities to participate
Learning Outcomes 5	Ability to communicate constructively

9. Teaching and Learning Strategies

Lectures, practical experiments, applications, scientific discussions

10. Evaluation methods

Weekly, monthly, daily, year-end exams and reports.

11.Faculty

Faculty Members

Academic Rank	Specialization	Special Requirements/Skills	Number of the teaching staff

			(if applicable)			
	General	**Special**			**Staff**	**Lecturer**
Assistant lecturer	Biology	Cytogenetic				

Professional Development
Mentoring new faculty members
Professional development of faculty members

12.**Acceptance Criterion**

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.**The most important sources of information about the program**

- Bolsover et al.,(2003). CELL BIOLOGY A Short Course. SECOND EDITION.
- CASARETT AND DOULL'S(2008). TOXICOLOGY. THE BASIC SCIENCE OF POISONS. Seventh Edition.
- Clare O'Connor,(2010). _Essentials_Cell_Biology.

14.Program Development Plan

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024-2025		Biological cell		___					___					___	
		Genetic		___					___					___	

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Cell biology and genetic
2. Course Code:
3. Semester / Year:
Course
4. Description Preparation Date:
16/3/2025
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
7. Course administrator's name (mention all, if more than one name)
Name: Duaa Hamada Salim Email: duaa.h.salim@tu.edu.iq
8. Course Objectives

Course Objectives	**- Delivering a general idea of life sciences and importance of this course to non-speciali departments, and students are also provided w some skills and information that make them fami with the most important topics that they may fac daily practical life.**

9. Teaching and Learning Strategies	
Strategy	1- Education strategy collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	**2hours/ theoretical** **3hours/ Practical**	**Understanding the topic of lectures With a monthly or daily exam** **- Familiarize students With new laboratory equipment that enables them acquire new skills information**	Cell biology / 1st course	**1- Explanation of the scientific material** **2- Writing and drawing illustrations on the blackboard** **3- Linking previo lectures with the current lecture.**	Weekly, monthly, daily, writt and end-year exams.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	**2hours/ theoretical** **3hours/ Practical**	**Understanding the topic of lectures With a monthly or daily exam** **- Familiarize students With new laboratory equipment that enables them to acquire new skills an information**	Genetic/ 2nd course	**1- Explanation of the scientific material** **2- Writing and drawing illustrations on the blackboard** **3- Linking previous lectures with the current lecture.**	Weekly, monthly, daily, written and end-of-year exams.

11.Course Evaluation

The distribution is as follows: 35 degrees monthly and daily exams for theoretical. 15 degrees monthly and daily exams for practical with reports. 50 marks for practical and theoretical final exams.

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Required textbooks (curricular books, if any)	CELL BIOLOGY
Main references (sources)	
Recommended books and references (scientific journals, reports...)	Bolsover et al.,(2003). CELL BIOLOGY A Short Course. SECOND EDITION. - CASARETT AND DOULL'S(2008). TOXICOLOGY. THE BASIC SCIENCE OF POISONS. Seventh Edition. - Clare O'Connor,(201 _Essentials_Cell_Biology.
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Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2025

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The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

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In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

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Academic Program Description Form

University Name: .....Tikrit.....
Faculty/Institute: .....science.....
Scientific Department: ...Biology.....
Academic or Professional Program Name: .....PhD.....
Final Certificate Name: ..... PhD in Biology.....
Academic System: …**course**……
Description Preparation Date: 5/10/2024
File Completion Date: 13/3/2025

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. Program Vision

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1. Focusing the vision, mission and objectives of Tikrit University / College of Science, and applying the best educational practices with a focus on quality assurance and performance and enhancing them.
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4. The college seeks to conclude scientific and cultural cooperation agreements with the corresponding colleges and the corresponding departments in the various colleges to achieve the best practices in the fields of teaching, learning and translation.
5. Focusing on the educational and moral aspect of all its members and spreading the spirit of dedication, tolerance, commitment and work to serve the country.
6. Paying attention to intellectual and cultural construction through openness to the experiences of other countries in scientific fields
7. Focusing on the educational and moral aspect of the student and spreading the spirit of dedication, tolerance and commitment.

4. Program Accreditation

5. Other external influences

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution	2			Basic

Requirements				**Course**
College Requirements	**Yes,**			
Department Requirements	**Yes,**			
Summer Training				
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
2024-2025/3rd stage		**Cell biology**	**theoretical**	**Practical**
2024-2025/3rd stage		**Genetic**	**theoretical**	**Practical**

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	- Enable the student to take note of the subject of biology. - The student should understand the nature of the genetic material and its chemical composition - The student should understand the mechanisms of transmission and reproduction of genetic material.
Skills	
Learning Outcomes 2	Expanding the student's skill to work in laboratories and health institutions.
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	Developing students' abilities to participate
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Lectures, practical experiments, applications, scientific discussions

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Weekly, monthly, daily, year-end exams and reports.

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Faculty Members

Academic Rank	Specialization	Special Requirements/Skills	Number of the teaching staff

			(if applicable)			
	General	**Special**			**Staff**	**Lecturer**
Assistant Professor Doctor	Biology	Cytogenetic				

Professional Development
Mentoring new faculty members
Professional development of faculty members

12.**Acceptance Criterion**

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

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14.Program Development Plan

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024-2025		Biological cell		___					___					___	
		Genetic		___					___					___	

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Cell biology and genetic
2. Course Code:
3. Semester / Year:
Course
4. Description Preparation Date:
13/3/2025
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Sarab Dalaf Khalaf Name:. Dr. Rafea Zaidan Mukhlif Alsugmiany Email : sarab.dalaf@tu.edu.iq Email: r-Z.mukhlif@tu.edu.iq
8. Course Objectives

Course Objectives	**- Delivering a general idea of life sciences and importance of this course to non-speciali departments, and students are also provided w some skills and information that make them fami with the most important topics that they may fac daily practical life.**

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Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

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Electronic References, Websites	https://www.researchgate.net/

Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2025

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determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .....Tikrit university .....
Faculty/Institute: .....College of science .....
Scientific Department: .....Biology .....
Academic or Professional Program Name:... Bachelor of Biology...
Final Certificate Name: ..... Bachelor of Biology....
Academic System: ……**Semesters** ……
Description Preparation Date: 5/10/2024
File Completion Date: 2025/3/16

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. **Program Vision**

Creating a distinguished scientific base for basic sciences that meets the requirements of society and industrial institutions and fills their needs, so that the college becomes unique with a distinguished scientific personality to achieve academic standards and reach Arab and international accreditation during the next five years.

2. Program Mission

Providing an advanced educational environment and developing a nucleus for scientific research capable of providing society with scientific competencies and trained specialized personnel through the introduction of the latest scientific technologies.

3. Program Objectives

1- Creating awareness and belief among the graduate in the civilizational mission of our nation and its pioneering and historical role in the emergence of human scientific civilization and its scientific development.
2- Preparing the specialized graduate who is familiar with the theoretical foundations of basic sciences and their field applications.
3- Providing the graduate with the scientific expertise required by the future field of work and informing him of the latest technical developments.
4- Creating a qualified cadre to engage in the field of university education in the future and capable of advancing the educational process in the various fields of science.
5- Qualifying scientific researchers who have the correct foundations for scientific research and development to be able to support the scientific and technological research movement in the country.
6- Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development.
7- Qualifying distinguished graduates who are able to engage in postgraduate studies to contribute effectively to science to solve complex scientific and technical dilemmas to develop other scientific and technical fields.
8- Preparing scientific cadres that deal rationally with science in order to serve humanity and the environment and have an effective role in global scientific activity through their contribution to international scientific conferences.
9- Paying attention to forming the basic base for specialized postgraduate studies in the relevant departments and encouraging them to do so in order to keep pace with development.
10- Upgrading the level of technical and administrative staff to support the educational process and create new capabilities commensurate with quality requirements.

11- Diversifying sources of educational culture and linking the student's scientific concepts to the problems of the surrounding environment.

4. Program Accreditation

Does the program have program accreditation? And from which agency?
12- Achieving educational goals and outcomes that meet distinguished academic standards.
13- Developing and developing the capabilities of faculty members.
14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

No

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	**8**	**90**		**Essential**
College Requirements	**Yes**			
Department Requirements	**Yes**			
Summer Training	**Yes**			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
4		**Classification bacteria**	**theoretical**	**practical**

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	A1- To create an appropriate environment that promotes learning and growth and imparts the ability to work with multidisciplinary groups in professional, health and research organizations A2- To expand and deepen their abilities in analytical and

	experimental research methods, data analysis, and drawing relevant conclusions for scientific writing and presentation. A3- Introducing the student to the basic principles related to the science of classification bacteria and everything related to it.
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 - Learn the ability to remember B3 - Learn the ability to relate and deduce
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	1- Powerpoint 2- PDF 3- Word 4- Educational videos

9. Teaching and Learning Strategies

At the end of the year, the student will be familiar with the following:
1- Introducing the student to the basic principles of bacterial classification
2- Reaching a general idea about the classification of bacteria and its importance and relationship to other sciences, and scientists' knowledge of classification and how to identify and diagnose different bacterial species.
3- The student learned about the pathological conditions that are poisoned by bacteria
4- Providing students with some skills in how to identify and diagnose different bacterial species

10. Evaluation methods

daily,monthly, exams and the end-of-semester exam.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Assistant Prof	Biology	Microbiology			/	

Professional Development

Mentoring new faculty members

Orienting new faculty members.

Professional development of faculty members

Professional development for faculty members.

12.**Acceptance Criterion**

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.**The most important sources of information about the program**

- Murray P.R., Rosenthal K.S., Pfaller M.A. Medical Microbiology. 8th Edition. Elsevier 2015.
- Jawetz M.& Adelberg. Medical Microbiology.28th Edition. MC Graw Hill.2019.

14.Program Development Plan

Updating curricula according to recent scientific discoveries.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024/2025		Clasification bacteria	Basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Classification bacteria
2. Course Code:
3. Semester / Year:
4/8
4. Description Preparation Date:
16/ 03/ 2025
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours per semester
7. Course administrator's name (mention all, if more than one name)
Name: lina qays yaseen Email: drlina@tu.edu.iq
8. Course Objectives

• To understand the Classifications of microorganisms. • Microbiological diagnostic procedures. •The importance of taxonomy and its relationship with other sciences • Learn about prokaryotic organisms and how they development •Identify the scientists contributing to the classification. • To make students open-minded and curious, we try our best to enhance and develop a scientific attitude. • Etiology and epidemiology of infectious diseases. • How to write the scientific name of a bacterium. • Learn about classification types. • use the correct method of collection, storage and transport of clinical specimens for microbiological. •Determine the methods and criteria adopted in the classification and diagnosis of microorganisms: • interpret microbiology laboratory tests for the diagnosis of infectious diseases Topics include the study of bacteria	• ..... • ..... • .....

9. Teaching and Learning Strategies	
Strategy	1- Educational strategy, collaborative concept planning. 2- Brainstorming education strategy.

	3- Education Strategy Notes Series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2 3 4 5 6 7 8 9 10 11 12 13 14	2	1- Providing students with analysis skills. 2- Informing students about the most important mode sources in the field of classification bacteria	Classification bacteria	1-Learn the ability to understand and assimila 2- Learn the ability to remember 3- Learn t ability connect a deduce	daily, monthly, written a end-of-semester exams.

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The distribution is as follows: 25 marks for monthly and daily exams for the semester. 50 marks for final exams

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Main references (sources)	Murray P.R., Rosenthal K.S., Pfaller M.A. Medical Microbiology. 8th Edition. Elsevier 2015.
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Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must

determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .....Tikrit university .....
Faculty/Institute: .....College of science .....
Scientific Department: .....Biology .....
Academic or Professional Program Name:... Bachelor of Biology...
Final Certificate Name: ..... Bachelor of Biology....
Academic System: ……**Semesters** ……
Description Preparation Date: 5/10/2024
File Completion Date: 2025/03/15

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. Program Vision

Creating a distinguished scientific base for basic sciences that meets the requirements of society and industrial institutions and fills their needs, so that the college becomes unique with a distinguished scientific personality to achieve academic standards and reach Arab and international accreditation during the next five years.

2. Program Mission

Providing an advanced educational environment and developing a nucleus for scientific research capable of providing society with scientific competencies and trained specialized personnel through the introduction of the latest scientific technologies.

3. Program Objectives

1- Creating awareness and belief among the graduate in the civilizational mission of our nation and its pioneering and historical role in the emergence of human scientific civilization and its scientific development.
2- Preparing the specialized graduate who is familiar with the theoretical foundations of basic sciences and their field applications.
3- Providing the graduate with the scientific expertise required by the future field of work and informing him of the latest technical developments.
4- Creating a qualified cadre to engage in the field of university education in the future and capable of advancing the educational process in the various fields of science.
5- Qualifying scientific researchers who have the correct foundations for scientific research and development to be able to support the scientific and technological research movement in the country.
6- Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development.
7- Qualifying distinguished graduates who are able to engage in postgraduate studies to contribute effectively to science to solve complex scientific and technical dilemmas to develop other scientific and technical fields.
8- Preparing scientific cadres that deal rationally with science in order to serve humanity and the environment and have an effective role in global scientific activity through their contribution to international scientific conferences.
9- Paying attention to forming the basic base for specialized postgraduate studies in the relevant departments and encouraging them to do so in order to keep pace with development.
10- Upgrading the level of technical and administrative staff to support the educational process and create new capabilities commensurate with quality

requirements.
11- Diversifying sources of educational culture and linking the student's scientific concepts to the problems of the surrounding environment.

4. Program Accreditation

Does the program have program accreditation? And from which agency?
12- Achieving educational goals and outcomes that meet distinguished academic standards.
13- Developing and developing the capabilities of faculty members.
14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

no

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	**3**	**90**		**Essential**
College Requirements	**Yes**			
Department Requirements	**Yes**			
Summer Training	**Yes**			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
4		Comparative anatomy	**theoretical**	**practical**
				3

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	A1- To create an appropriate environment that promotes learning and growth and imparts the ability to work with multidisciplinary groups

	in professional, health and research organizations A2- To expand and deepen their abilities in analytical and experimental research methods, data analysis, and drawing relevant conclusions for scientific writing and presentation. A3- Introducing the student to the basic principles related to the science of histology and to take note of the scientific terms in Comparative anatomy and their meanings . A4 - To take note of the scientific terms in comparative anatomy and their meanings.
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 - Learn the ability to remember B3 - Learn the ability to relate and deduce B4 - The student's knowledge of the most important phenotypic and anatomical characteristics through the similarities and differences between various types of vertebrate organisms such as mammals, birds, and fish, and providing the student with the necessary skill to study the anatomical characteristics of various organisms. B5 - Enabling students to analyze reality from a scientific perspective.
Learning Outcomes 3	Learning Outcomes Statement 3 B4 - The student's knowledge of the concept of histology. B5 - Enabling students to analyze reality from a scientific perspective.
Ethics	
Learning Outcomes 4	1- Powerpoint 2- PDF 3- Word 4- Educational videos 5. Slides 6. Practical lectures 7. Sculptures

9. **Teaching and Learning Strategies**

At the end of the year, the student will be familiar with the following:
1- Introducing the student to the basic principles related to Comparative anatomy.
2- - The teaching of this course aims to cover topics in theoretical foundations that include the process Which includes the process of identifying the most important

phenotypic and anatomical characteristics through the similarities and differences between various types of vertebrate organisms such as mammals, birds, and fish, and providing the student with the necessary skill to study the anatomical characteristics of various organisms.

3 - The student gets to know the Appearance and anatomical characteristics of various organisms and their classification.

4- Giving the student an expanded and modern idea about the Comparative anatomy and knowing the similarities and differences between different types of vertebrate organisms.

10. Evaluation methods

1) Monthly exams.

2) Daily exams.

3) Oral questions during the lecture that rely on brainstorming

4) Duties

5) Reports.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
assistant teacher	Biology	Comparative anatomy			/	

Professional Development
Mentoring new faculty members
Orienting new faculty members.
Professional development of faculty members
Professional development for faculty members.

12.**Acceptance Criterion**
(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.**The most important sources of information about the program**	
1 - Required prescribed books	Basics of comparative anatomy of chordates,
2- Main references (sources)	Books and research published by Iraqi universities and reputable international universities.
A-Recommended books and references (scientific journals, reports,...)	Basics of comparative anatomy of vertebrates
B - Electronic references, Internet sites...	Electronic virtual library, solid references from the Internet

14.Program Development Plan
Updating curricula according to recent scientific discoveries.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024/2025		Practical comparative anatomy	Basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Practical comparative anatomy
2. Course Code:
3. Semester / Year:
4/8
4. Description Preparation Date:
15/ 03/ 2025
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
45 hours per semester
7. Course administrator's name (mention all, if more than one name)
Name: Lamyaa khames naeif Email: Lamyaa.m.khames@tu.edu.iq
8. Course Objectives

At the end of the year, the student will be familiar w the following: **1- Introducing the student to the basic principles** **related to** Practical comparative anatomy **2- - The teaching of this course aims to cover topics in theoretical foundations that include** It includes identifying the most important phenotypic and anatomical characteristics through the similarities and differences between various types of vertebrate organisms such as mammals, birds, and fish, and providing the student with the necessary skill to study the anatomical characteristics of various organisms. **3 - The student gets to know the** Practical comparative anatomy	• ..... • ..... • .....

9. Teaching and Learning Strategies	
Strategy	1- Educational strategy, collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Study the parts of the microscope and how to view samples	The concept of comparative anatomy	My attendance +PDF Power point	**Daily and weekly tests and reports**
2	3	Understanding the topic of the lecture and introducing students to new laboratory equipment that enables them to acquire new skills and information	Classification of the phylum Chordata	My attendance +PDF Power point	**Daily and weekly and reports**
3	3	Understand the lectur topic	Classification of protochordates	My attendance +PDF Power point	**Daily and weekly and reports**
4	3	Understand lecture topic	Secondary cephalochord division	My attendance +PDF Power point	**Daily and weekly and reports**
5	3	Understand the lectur topic	Vertebrate or secondary cranial division	My attendance +PDF Power point	**Daily and weekly and reports**
6	3	Understand the lectur topic	Classification of cartilaginous fish	My attendance +PDF Power point	**Daily and weekly and reports**
7	3	Understand the lectur topic	Classification of bony fish	My attendance +PDF Power point	**Daily and weekly and reports**

8	3	Monthly exam	Monthly exam	My attendance +PDF Power point	**Daily and weekly and reports**
9	3	Understand the lectur topic	Classify birds	My attendance +PDF Power point	**Daily and weekly and reports**
10	3	Understand the lectur topic	Class of amphibians	My attendance +PDF Power point	**Daily and weekly and reports**
11	3	Understand the lectur topic	Class of reptiles	My attendance +PDF Power point	**Daily and weekly and reports**
12	3	Understand the lectur topic	The cutaneous	My attendance +PDF Power point	**Daily and weekly and reports**
13	3	Understand the lec topic	system of vertebrates	My attendance +PDF Power point	**Daily and weekly and reports**
14	3	Understand the lec topic	Skeletal system	My attendance +PDF Power point	**Daily and weekly and reports**
15	3	Monthly exam	Monthly exam	My attendance +PDF Power point	**Daily and weekly and reports**

11.Course Evaluation

The distribution is as follows: 25 marks for monthly and daily exams for the semester. 50 marks for final exams

12.Learning and Teaching Resources

Basics of comparative anatomy of chordates,	1 - Required prescribed books
Books and research published by Iraqi universities and reputable international universities.	2- Main references (sources)
Basics of comparative anatomy of vertebrates	A-Recommended books and references (scientific journals, reports,...)
Electronic virtual library, solid references from the Internet	B - Electronic references, Internet sites...

Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2025

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2024 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine

the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .....Tikrit university .....
Faculty/Institute: .....College of science .....
Scientific Department: .....Biology .....
Academic or Professional Program Name:... Bachelor of Biology...
Final Certificate Name: ..... Bachelor of Biology....
Academic System: ……**Semesters** ……
Description Preparation Date: 5/10/2024
File Completion Date: 2025/03/15

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Dr: Ayman Adwan Abid	**Dr: Firas Faris Rija**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. Program Vision

Creating a distinguished scientific base for basic sciences that meets the requirements of society and industrial institutions and fills their needs, so that the college becomes unique with a distinguished scientific personality to achieve academic standards and reach Arab and international accreditation during the next five years.

2. Program Mission

Providing an advanced educational environment and developing a nucleus for scientific research capable of providing society with scientific competencies and trained specialized personnel through the introduction of the latest scientific technologies.

3. Program Objectives

1- Creating awareness and belief among the graduate in the civilizational mission of our nation and its pioneering and historical role in the emergence of human scientific civilization and its scientific development.
2- Preparing the specialized graduate who is familiar with the theoretical foundations of basic sciences and their field applications.
3- Providing the graduate with the scientific expertise required by the future field of work and informing him of the latest technical developments.
4- Creating a qualified cadre to engage in the field of university education in the future and capable of advancing the educational process in the various fields of science.
5- Qualifying scientific researchers who have the correct foundations for scientific research and development to be able to support the scientific and technological research movement in the country.
6- Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development.
7- Qualifying distinguished graduates who are able to engage in postgraduate studies to contribute effectively to science to solve complex scientific and technical dilemmas to develop other scientific and technical fields.
8- Preparing scientific cadres that deal rationally with science in order to serve humanity and the environment and have an effective role in global scientific activity through their contribution to international scientific conferences.
9- Paying attention to forming the basic base for specialized postgraduate studies in the relevant departments and encouraging them to do so in order to keep pace with development.

10- Upgrading the level of technical and administrative staff to support the educational process and create new capabilities commensurate with quality requirements.
11- Diversifying sources of educational culture and linking the student's scientific concepts to the problems of the surrounding environment.

4. Program Accreditation

Does the program have program accreditation? And from which agency?
12- Achieving educational goals and outcomes that meet distinguished academic standards.
13- Developing and developing the capabilities of faculty members.
14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

Teaching aids and PowerPoint

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	**90**	**3**		**Essential**
College Requirements	**Yes**			
Department Requirements	**Yes**			
Summer Training	**Yes**			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
2024/2025 fourth		**Medical Mycology**	**theoretical**	**practical**
			2 hours	**3 hours**

8. Expected learning outcomes of the program

Knowledge

Learning Outcomes 1	A1- To create an appropriate environment that promotes learning and growth and imparts the ability to work with multidisciplinary groups in professional, health and research organizations A2- To expand and deepen their abilities in analytical and experimental research methods, data analysis, and drawing relevant conclusions for scientific writing and presentation. A3- Introducing the student to the basic principles related to the science of Phytopathology and everything related to it.
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 - Learn the ability to remember B3 - Learn the ability to relate and deduce
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	1-Powerpoint 2- PDF 3- Word 4- Educational videos

9. Teaching and Learning Strategies

At the end of the year, the student will be familiar with the following:
1- Introducing the student to the basic principles related to medical mycology
2- - The teaching of this course aims to cover topics in theoretical foundations that include the process of mechanisms for the occurrence of fungal disease , the disorders that occur, and the diseases resulting from these disorders.
3 - The student gets to know the natural forms
4- Giving the student an expanded and modern idea about the science of medical mycology and the changes that occur when infected with various diseases.

10. Evaluation methods

Weekly, monthly, daily exams and the end-of-semester exam.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Assistant lecturer	Biology	Mycology			/	
Assistant lecturer	biology	mycology			/	

Professional Development
Mentoring new faculty members
Orienting new faculty members.
Professional development of faculty members
Professional development for faculty members.

12.**Acceptance Criterion**

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.**The most important sources of information about the program**

-Main references in mycology and fungal diseases / books and research published from Iraqi universities and international universities.

- Recommended books and references / General Mycology
- Electronic review/internet sites/virtual library.

14.Program Development Plan

Updating curricula according to recent scientific discoveries.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024/2025		Medical mycology	Basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Medical mycology
2. Course Code:
3. Semester / Year:
Semester/ 2024-2025
4. Description Preparation Date:
15/ 03/ 2025
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
45 hours per semester
7. Course administrator's name (mention all, if more than one name)
Name: Noor Adnan Abdullah noor.adnanabdullah23@tu.edu.iq

8. Course Objectives	
At the end of the year, the student will be familiar with the following: **1- Introducing the student to the basic principles related to medical mycology** **2- - The teaching of this course aims to cover topics the proces mechanisms for the occurrence of** **mycology conditions, the disorders that occur, and the disease resulting from these disorders.** **3 - The student gets to know the concept of diseases and pract fungi and the ability to solve problems.** **4- Giving the student an expanded and modern idea about science of medical mycology and the changes that occur w infected with various diseases.**	• ..... • ..... • .....

9. Teaching and Learning Strategies	
Strategy	1- Educational strategy, collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	1- Providing students with analysis skills. 2- Informing students about the most important modern sources the field of medical mycology	Medical mycology	1-Learn the ability to understand and assimila 2- Learn the ability to remember 3- Learn the ability connect and deduce	Weekly, monthly, daily, written and end-of-semester exams.

11.Course Evaluation	
The distribution is as follows: 25 marks for monthly and daily exams for the semester. 50 marks for final exams	
12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	/
Main references (sources)	Main references in medical mycolog and fungal diseases / books and research published from Iraqi universities and international universities
Recommended books and references (scientific journals, reports...)	Electronic view/internet sites/ virtual library.
Electronic References, Websites	https://www.researchgate.net/

Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2025

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Academic Program Description Form

University Name: .....University of Tikrit.....
Faculty/Institute: .....College of Science.....
Scientific Department: .....Biology.....
Academic or Professional Program Name .....Bachelor of Biology
Final Certificate Name: ..... Bachelor of Biology.....
Academic System: …Semester……
Description Preparation Date:
File Completion Date: 17/3/2025

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature:

Approval of the Dean

1. **Program Vision**
Ensuring that the actual need for teaching staff is fulfilled through appointment and transfer in computer specializations and some mathematics specializations. Urging teachers to complete scientific research in the field of specialization. Raising the academic and scientific level of college students and involving the

teaching staff in development courses inside and outside the country. Involving technical and administrative staff in development courses, one course during the academic year.

2. Program Mission

Providing an advanced educational environment and establishing a nucleus for scientific research capable of providing society with scientific competencies and trained specialized personnel through the introduction of the latest scientific technologies.

3. Program Objectives

General statements describing what the program or institution intends to achieve.

4. Program Accreditation

N/A

5. Other external influences

N/A

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	**15**	**2**		**Secondary**
College Requirements	**Yes**			
Department Requirements	**Yes**			
Summer Training	**N/A**			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
2024-2025/ Third			**theoretical**	**practical**
			2	

8. Expected learning outcomes of the program

Knowledge	
understanding	The students should be able to understand the academic program and express it in his own language and words.
Skills	
Reading	The students should be able to read correctly and spell the word in the right way
Basic grammar	The students should be able to produce correct sentence with correct grammar.
Ethics	
Sharing thoughts	Enhance the students ability to share thoughts.

9. Teaching and Learning Strategies

Explain and discuss the scientific material related to tenses in language. Enhance the student's ability to write by doing homework and paraphrasing some paragraph. Encourage the students to make a conversation among them from their daily life.

10. Evaluation methods

Weekly, dailly, monthly, yearly.

11.Faculty

Faculty Members

Academic Rank	**Specialization**		**Special Requirements/Skills (if applicable)**		**Number of the teaching staff**	
	General	**Special**			**Staff**	**Lecturer**
Assistant lecturer	Translation	Translation			Staff	Lecturer

Professional Development

Mentoring new faculty members
Briefly describes the process used to mentor new, visiting, full-time, and part-time faculty at the institution and department level.
Professional development of faculty members
Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

12.Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13.**The most important sources of information about the program**

Sources adopted by the ministry of higher education and scientific research.

14.Program Development Plan

Providing a set of advice and guidance that is in the student's interest to develop his skills, including teamwork, the spirit of cooperation, time management, and setting priorities.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2024-2025		English language		*	*	*	*	*	*	*	*	*	*	*	*

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
English language
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
17/3/2025
5. Available Attendance Forms:
In Person only
6. Number of Credit Hours (Total) / Number of Units (Total)
2 hours weekly
7. Course administrator's name (mention all, if more than one name)
Name: Assistant lecturer Omar Ali SALEH Email: omar.saleh122@tu.edu.iq
8. Course Objectives

Comprehension and understanding: The student has understood the scientific materi and expressed it in his own style and language. **The ability to remember English words and put them into useful sentences**	• ..... • ..... • .....

9. Teaching and Learning Strategies	
Strategy	Explain and discuss the scientific material related to tenses language. Enhance the student's ability to write by doing homew and paraphrasing some paragraph. Encourage the students to ma a conversation among them from their daily life.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

11.Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ..... etc	
12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2025

Introduction:

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In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate

description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .....Tikrit university .....

Faculty/Institute: .....College of science .....

Scientific Department: .....Biology .....

Academic or Professional Program Name:... Bachelor of Biology...

Final Certificate Name: ..... Bachelor of Biology....

Academic System: ……**Semesters** ……

Description Preparation Date: 5/10/2024

File Completion Date: 14/2/2025

Signature:	**Signature:**
Head of Department Name:	**Scientific Associate Name:**
Date:	**Date:**

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date:

Signature:

Approval of the Dean

1. **Program Vision**

Creating a distinguished scientific base for basic sciences that meets the requirements of society and industrial institutions and fills their needs, so that the college becomes unique with a distinguished scientific personality to achieve academic standards and reach Arab and international accreditation during the next five years.

2. **Program Mission**

Providing an advanced educational environment and developing a nucleus for scientific research capable of providing society with scientific competencies and trained specialized personnel through the introduction of the latest scientific technologies.

3. **Program Objectives**

1- Creating awareness and belief among the graduate in the civilizational mission of our nation and its pioneering and historical role in the emergence of human scientific civilization and its scientific development.

2- Preparing the specialized graduate who is familiar with the theoretical foundations of basic sciences and their field applications.

3- Providing the graduate with the scientific expertise required by the future field of work and informing him of the latest technical developments.

4- Creating a qualified cadre to engage in the field of university education in the future and capable of advancing the educational process in the various fields of science.

5- Qualifying scientific researchers who have the correct foundations for scientific research and development to be able to support the scientific and technological research movement in the country.

6- Preparing graduates capable of absorbing and dealing with advanced modern technologies and contributing to their future development.

7- Qualifying distinguished graduates who are able to engage in postgraduate studies to contribute effectively to science to solve complex scientific and technical dilemmas to develop other scientific and technical fields.

8- Preparing scientific cadres that deal rationally with science in order to serve humanity and the environment and have an effective role in global scientific activity through their contribution to international scientific conferences.

9- Paying attention to forming the basic base for specialized postgraduate studies in the relevant departments and encouraging them to do so in order to keep pace with development.

10- Upgrading the level of technical and administrative staff to support the educational process and create new capabilities commensurate with quality requirements.

11- Diversifying sources of educational culture and linking the student's scientific concepts to the problems of the surrounding environment.

4. Program Accreditation

Does the program have program accreditation? And from which agency?

12- Achieving educational goals and outcomes that meet distinguished academic standards.

13- Developing and developing the capabilities of faculty members.

14- Providing scientific services and consultations to various sectors of the state and private companies.

5. Other external influences

no

6. Program Structure				
Program Structure	**Number of Courses**	**Credit hours**	**Percentage**	**Reviews***
Institution Requirements	**8**	**90**		**Essential**
College Requirements	**Yes**			
Department Requirements	**Yes**			
Summer Training	**Yes**			
Other				

* This can include notes whether the course is basic or optional.

7. Program Description				
Year/Level	**Course Code**	**Course Name**	**Credit Hours**	
4		**Pathological analysis**	**theoretical**	**practical**

8. Expected learning outcomes of the program	
Knowledge	
Learning Outcomes 1	A1- To create an appropriate environment that promotes learning and growth and imparts the ability to work with multidisciplinary groups in professional, health and research organizations A2- To expand and deepen their abilities in analytical and experimental research methods, data analysis, and drawing relevant conclusions for scientific writing and presentation. A3- Introducing the student to the basic principles related to the science of pathological analysis and everything related to it.
Skills	
Learning Outcomes 2	B1 - Learn the ability to understand and comprehend B2 – Learn the ability to remember B3 - Learn the ability to relate and deduce
Learning Outcomes 3	Learning Outcomes Statement 3

Ethics	
Learning Outcomes 4	1- Powerpoint 2- PDF 3- Word 4- Educational videos

9. Teaching and Learning Strategies

At the end of the year, the student will be familiar with the following:

1- Introducing the student to the basic principles related to pathological analyses

2- - The teaching of this course aims to cover topics in theoretical foundations that include the process of mechanisms for the occurrence of pathological conditions, the disorders that occur, and the diseases resulting from these disorders.

3 - The student gets to know the natural forms and pathological conditions, as well as the student's knowledge of normal and abnormal values (pathological conditions), as well as teaching the student the pathological conditions that lead to an increase or decrease in these values.

4- Giving the student an expanded and modern idea about the science of pathological analyzes and the normal and abnormal ranges, in addition to the changes that occur when infected with various diseases.

10. Evaluation methods

Weekly, monthly, daily exams and the end-of-semester exam.

11. Faculty

Faculty Members

Academic Rank	Specialization	Special Requirements/Skills	Number of the teaching staff

			(if applicable)			
	General	**Special**			**Staff**	**Lecturer**
Assistant Prof	Biology	Pathophysiology			/	

Professional Development
Mentoring new faculty members
Orienting new faculty members.
Professional development of faculty members
Professional development for faculty members.

12. Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

13. The most important sources of information about the program

- Clinical laboratory Science review – 4th edition
- Clinical biochemistry and metabolic medicine – 8 edition – Martin Andrew crook

14. Program Development Plan

Updating curricula according to recent scientific discoveries.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2023/2024		Pathological analysis	Basic												

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name:
Pathological analysis
2. Course Code:
3. Semester / Year:
4/8
4. Description Preparation Date:
14/ 02/ 2024
5. Available Attendance Forms:
In person only
6. Number of Credit Hours (Total) / Number of Units (Total)
75 hours per semester
7. Course administrator's name (mention all, if more than one name)
Name: firas faris rija Email: firas_tucon@tu.edu.iq

8. Course Objectives	
At the end of the year, the student will be familiar with the following: **1- Introducing the student to the basic principles related to pathological analyses** **2- - The teaching of this course aims to cover top in theoretical foundations that include the process mechanisms for the occurrence of pathological conditions, the disorders that occur, and the disea resulting from these disorders.** **3 - The student gets to know the natural forms an pathological conditions, as well as the student's knowledge of normal and abnormal values (pathological conditions), as well as teaching the student the pathological conditions that lead to an increase or decrease in these values.** **4- Giving the student an expanded and modern i**	• ..... • ..... • .....

about the science of pathological analyzes and normal and abnormal ranges, in addition to changes that occur when infected with vari diseases.	

9. Teaching and Learning Strategies

Strategy	1- Educational strategy, collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2 3 4 5 6 7 8 9 10 11 12 13 14	2	1- Providing students with analysis skills. 2- Informing students about the most important mode sources in the field of pathological analyses.	Pathological analysis	1-Learn the ability to understand and assimila 2- Learn the ability to remember 3- Learn t ability connect a deduce	Weekly, monthly, da written a end-of-semester exams.

11. Course Evaluation

The distribution is as follows: 25 marks for monthly and daily exams for the semester. 50 marks for final exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Clinical laboratory Science review 4th edition
Main references (sources)	Clinical biochemistry and metabo medicine – 8 edition – Mar

	Andrew crook
Recommended books and references (scientific journals, reports...)	Clinical laboratory Science review 4th edition
Electronic References, Websites	https://www.researchgate.net/