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 3/9/2025 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: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبلة رئيس قسم علوم الحياة كلية العلوم

Head of Department Name:

Date:

Signature: أ.م.د. فارس فارس رجا معاون العميد للشؤون العلمية والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم - قسم علوم الحياة Department of Biology Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور عبد الخالق عواد محمد

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**	
2023-2024/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	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

diseases associated with metabolic processes	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
2024-2023		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: 2024\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 point	Weekly, monthly, daily, written
2	2 hour	Demolitions and construction – Carbohydrate metabolism			
3	2 hour			PDF Power point	
4	2 hour	Digestion of - carbohydrates -			

5	2 hour	Carbohydrate absorption		PDF Power point	exams, an
6	2 hour	Anaerobic - glycolysis			the end-o
7	2 hour	alcoholic - fermentation			year exan
8	2 hour	- Aerobic glycolysis		PDF Power point	
9	2 hour	Krebs cycle- The respiratory -			
10	2 hour	chain -The pentose phosphate		PDF Power point	
11	2 hour	pathway -The glyoxylate cycle			
12	2 hour	Glycogenesis- Glycogenolysis-		PDF Power point	
13	2 hour	Gluconeogenesis- Energy calculations			
14	2 hour	foraerobic and anaerobicglycolysis			
15	2 hour	processes		PDF Power point	
16	2 hour	Introduction and- definition ofmetabolic disorders and theirprocesses			
17	2 hour	Glycogen Storage Diseases Symptoms Diagnosis -Treatment		PDF Power point	
18	2 hour	GALACTOSEMIA- Symptoms- Diagnosis- -Treatment			
19	2 hour			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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Scientific Department: .....Biology .....

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

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

Academic System: .....Semesters .....

Description Preparation Date: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبدا
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.م.د. عباس فارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق عواد محمد

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	
		Medical mycology	theoretical	practical
4				

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										
				Knowledge				Skills				Ethics		
Year/Level	Course Code	Course Name	Basic or optional	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2025/2026		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/ 2026
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 wi the following: 1- Introducing the student to the basic principles related to Medical mycology analyses 2- - The teaching of this course aims to cover topic theoretical foundations that include the process of mechanisms for the occurrence of Medical mycology conditions, the disorders that occur, and the disease 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 stude the Medical mycology conditions that lead to an increase or decrease in these values. • ..... • ..... • .....

4- Giving the student an expanded and modern i about the science of Medical mycology analyzes and normal and abnormal ranges, in addition to the chan that occur 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.

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 Mycology Current Trends and Future Prospects 1st**

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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

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كلية العلوم

Head of Department Name:

Date:

Signature: أ.م.د. فراس فارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق [illegible] محمد

Approval of the Dean

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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	
			theoretical	practical
4		Microbial physiology		

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
2025/2026		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/ 2026
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 scienti literature, and think critically abo microbial concepts and experimen 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

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)	د. مها رؤوف 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/

Ministry of Higher Education and Scientific Research
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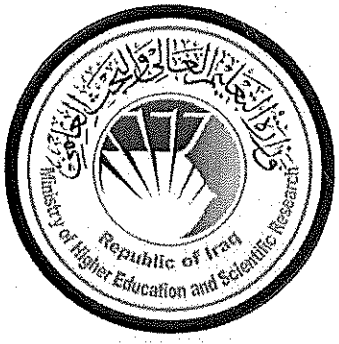
Accreditation Department



Academic Program and Course Description Guide

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: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبد
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.م. هواس فارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق محمد محمود

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
2025/2026		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/ 9/ 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 familia with the following: 1- Introducing the student to the basic principle related 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 microbiology, the disorders that occur, and the diseases resulting from these disorders. 3 – The student gets to know the natural forms Genetic microbiology conditions, as well as the student's knowledge of normal and abnormal values (pathological conditions), as well as teaching the student the Genetic microbiology conditions that lead to an increase or decrease i these values.	• ..... • ..... • .....

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

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Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
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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. 4th 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 A, F R. Microbial Genetics and Evoluti Microorganisms. 2022 23;10(7):1274. 10.3390/microorganisms10071274. PMID: 35888993; PMCID: PMC9315
Electronic References, Websites	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

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2025

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

Academic System: .....Semesters .....

Description Preparation Date: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبد
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.م.د. عواس فارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق عواد محمد

Approval of the Dean

1. Program Vision

Tikrit university and science college direct staff and students in correct direction to be creative skilled in biology

2. Program Mission

Graduating students with high knowledge and skills in biology beneficial for society

3. Program Objectives

1-Obtaining good teaching

2- Learning students scientific creativity

3- Graduating students beneficial for society

4-Cooperation with other colleges and scientific departments

5-Learning high ethics and good characters

6-Learning from international universities

4. Program Accreditation

no

5. Other external influences

no

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
				Principle
Institution				

Requirements				requirement
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	
			theoretical	practical
2023-2024/fourth class		Pathoanalysis		

8. Expected learning outcomes of the program	
Knowledge	
Learning Outcomes 1	Learning students importance and appilications of Pathoanalysis
Skills	
Learning Outcomes 2	Pathoanalysis skills for students
Learning Outcomes 3	
Ethics	
Learning Outcomes 4	Ideas generation sharing and discussion
Learning Outcomes 5	

9. Teaching and Learning Strategies
1-explaning pathoanalysis details
2-using best presentation tools
3-sharing and discussion ideas by students

10. Evaluation methods

Daily monthly and final exams

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Professor assistant	Biology	Animal physiology– Immunology			Permanent college teaching staff	

Professional Development

Mentoring new faculty members

Development of skills of new staff members

Professional development of faculty members

Improving abilities of staff

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

Porth's Pathophysiology (2014).

VANDER'S Human Physiology (2014)

14. Program Development Plan
Using advanced equipments of pathoanalysis and using advanced teaching tools such as ipads

Program Skills Outline															
				Required program Learning outcomes											
				Knowledge				Skills				Ethics			
Year/Level	Course Code	Course Name	Basic or optional	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:

Pathoanalysis

2. Course Code:

3. Semester / Year:

Semester 2023-2024

4. Description Preparation Date:

1/ 03/ 2024

5. Available Attendance Forms:

presence

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

30 hours

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

Name: Assistant professor Dr. Mohanad Hasan Mahmood
Email: adamadam2016@tu.edu.iq
Name: Lecturer Dr.Reem Adeeb

8. Course Objectives

Course Objectives	• **Learning Pathoanalysis basics students.....** • **.. Learning Pathoanalysis skills students...** • **.....**

9. Teaching and Learning Strategies

Strategy	Cooperative learning Ideas storming learning By notices taking learning

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	1-ideas	Pathophysiolo	Wood boa	Dialy

2	2	understandi	Inner environment	Electronic board	mont final
3	2	2-thinking and ma	Balance water a	Speciment Slides	exam
4	2	conclusions	electrolytes	Powerpoi	
5	2	3-applicatio	Cell lesions	experime	
6	2	4-scientific logic	Inflammation		
7	2	5- memorizati	Infection a infectious		
8	2	6-creativity	diseases		
9	2		Infection a immunity		
10	2		Tumors		
11	2		Diseases		
12	2		blood and ly nodes		
13	2				
14	2				
15	2				

11. Course Evaluation

Distributing the score out of 35 degree according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc and 35 degree for final exam

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Pathophysiology (Ruba aoni al-saee 2008)
Main references (sources)	Porth's Pathophysiology (2014)
Recommended books and references (scientific journals, reports...)	VANDER'S Human Physiology (2014)
Electronic References, Websites	www.wikipedia.org

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2025

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

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Description Preparation Date: 5/9/2025

File Completion Date: 14/2/2026

Signature:

Head of Department Name:

أ.م.د. ايمن عدوان عبد
رئيس قسم علوم الحياة
كلية العلوم

Signature:

Scientific Associate Name:

معاون العميد للشؤون العلمية
والدراسات العليا

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

Date:

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق علوان محمد

Approval of the Dean

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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?

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	
		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										
				Knowledge				Skills				Ethics		
Year/Level	Course Code	Course Name	Basic or optional	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2025/2026		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/ 2026
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.

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 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: 5/9/2025

File Completion Date: 14/2/2026

Signature:

Head of Department Name:

أ.م.د. ايمن عدوان عبد
رئيس قسم علوم الحياة
كلية العلوم

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

Signature:

Scientific Associate Name:

أ.م.د. عباس فارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Date:

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق علوان محمد

Approval of the Dean

1. Program Vision

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

2. Program Mission

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.

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? 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.

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		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:
14/2/2026
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 invertebra 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 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		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 er 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=

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: .....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: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبد
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.م.د. هواس فارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق محمد محمد

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	
			theoretical	practical
2023-2024/ Third			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
2025-2026		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:
17/9/2025
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	• .....
material 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 make 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

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Academic Program Description Form

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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: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبد
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.م.د. فراس فارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق علوان محمد

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**	
2023/2024 **Third**		**Phytopathology**	**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 Phytopathology

2- – The teaching of this course aims to cover topics in theoretical foundations that include the process of mechanisms for the occurrence of plant 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 Phytopathology 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 plant 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
2025/2026		Phytopathology	Basic												

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

Course Description Form

1. Course Name:
Phytopathology
2. Course Code:
3. Semester / Year:
Semester/ 2025-2026
4. Description Preparation Date:
15/ 9/ 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: rand Salwan Numan Rand.salwan.numan@tu.edu.iq **Name: Mohammed Sami Farhan** mohammed.s.farhan@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 Phytopathology 2- - The teaching of this course aims to cover topics the process of mechanisms for the occurrence of Phytopatholog conditions, the disorders that occur, and the diseases result from these disorders. 3 - The student gets to know the concept of diseases practical fungi and the ability to solve problems. 4- Giving the student an expanded and modern idea about science of Phytopathology 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 Phytopathology	Phytopathology	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 mycology and fungal plant 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

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 3/5/2023 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: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبد
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.د. عباس فارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق وهاب محمد
معاون العميد للشؤون العلمية

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**
- Practical lectures and conducting experiments in the laboratory

5. **Other external influences**
lustrations and PowerPoint

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	
2024-2023/4		helminthes	theoretical	practical
				3 hours

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	A1-The ability to work with multidisciplinary groups in professional and health organizations and to create an appropriate environment that promotes learning and growth and imparts research. A2- Introducing students to the most important types of parasitic worms that infect humans. A3- Introducing students to the most important types of worms that infect animals. And the life cycle of each worm. A4- Teaching students methods of prevention and treatment of parasitic worms that are harmful to humans and their animals. A5- Introducing the student to the basic principles related to parasitology and everything related to it. A6- Informing students about the most important laboratory devices and solutions used to diagnose worms inside the laboratory.

	A7- Scientific concepts will be presented. Fundamentals of invertebrate science. A8- Explain the taxonomic, morphological, structural and biological properties of worms. A9- Identify living organisms related to the specialty and classify them following the scientific method. A10- Conduct awareness in his community about parasitic worms and their impact on the environment and living organisms
Skills	
Learning Outcomes	B1 - Knowing the students' ability to make slides of models of parasitic worms isolated from humans or animals B2 - Knowing the students' ability to distinguish between types of parasitic worms by the shape and size of their eggs B3 - Learning the students' ability to deduce parasitic infection through studying the clinical symptoms Laboratory analysis of the infected person
Ethics	
	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 matters:

1- Introducing the student to the basic principles related to parasitic worms

2- The teaching of this course aims to cover topics in methods of prevention and treatment of parasitic worms, as well as how to diagnose

3- The student knows the shapes and types of pathogenic worms or their scientific name and how to distinguish between the types

4- Giving the student an expanded idea and conversation about parasitology. 5- Giving them a general idea of the most important tools, solutions, and devices used in the parasitology laboratory.

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	Parasitology			/	

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–Prescribed methodological books 2– Approved internet sites and the virtual library 3– Scientific sources/parasitology

14. Program Development Plan
1- Including topics that are consistent with the modernity and requirements of scientific and practical life and what scientists have achieved on an ongoing basis 2- Using laboratory equipment with high specifications

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		General entomology	Basic	—					—					—	

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

Course Description Form

1. Course Name:
Practice heleminthes
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
16/ 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: Lubna Arkan Younis Email: Lubnaarkanyounis21@gmail.com
8. Course Objectives

At the end of the year, the student will familiar with the following: 1- Introducing the student to the basic information related to parasitic worms their forms and types, and knowing the beneficial and harmful ones. 2- The teaching of this course aims to introduce topics in theoretical foundations that include the process of mechanisms of occurrence of disease states and disorders that occur and result from these worms. 3- The student will be introduced to methods of diagnosing Worms in the laboratory 4- Enabling the student to identify metho	• ..... • ..... • .....

of treatment for worms. 5- Enabling the student to distinguish between eggs	

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	1- Providi studen with th skill of diagnos g and disting hing betwee types o helemi hses 2- Introducir students t modern sources in the field o parasitolo	-Such as laboratory diagnosis of parasite -types of worms eastern or Chinese - -liverworms -pulmonary intestina and blood worms---- -comparison betwee blood worms first month's exa tapeworms a worms. - Taena soulium -Annelid tapeworms order Trichocerata threadworm -Ascaris hookworm -second month exam --review chapter slid	1-Learn the ability to understand and assimilate 2- Learn the ability to remember 3-Learnthe ability connectand deduce	Weekly, monthly, daily, Written and end-semester exams.

11. Cour3se E3valuation	
The distribution is as follows: 15marks for monthly and daily exams for the semester. 15 marks for final exams	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	The final prescribed book
Main references (sources)	1.Medical parasitology.2nd ed.(2005) 2.District laboratory paractice in tropical countries.vol.(1).2nd ed.(1998)
Recommended books and references (scientific journals, reports...)	Parasitology book / Prof. Dr. Ismail Abdel Wahab Al-Hadithi with Prof. Dr Abdul Hussein Habash Awad - Parasitology book / Prof. Dr. Ibrahim Shaaban and Prof. Dr. Bandar Al-Raw
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

2024

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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: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبد
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.م.د. عباس فارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق علوان محمد

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	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	
2023/2024: Second		Parasitology	theoretical	practical
				Yes

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 matters:

1- Introducing the student to the basic practical principles related to parasites.

2- The teaching of this course aims to introduce topics on practical foundations that include the process of diagnosing external and internal parasites through a microscope and through clinical examination.

3- The student gets to know the normal 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 pathogenic parasitology 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	Parasitology			/	

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

- Parasitology: An Integrated Approach (New York Academy of Sciences) 2nd Edition: Publisher (Wiley), Publication date: July 12, 2022.
- Parasitic Diseases 7th Edition: Publisher (Wiley), Publication date: May 6, 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
2025/2026		Parasitology	Mandatory												

- 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:
Courses
4. Description Preparation Date:
14/ 03/ 2026
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: M.M Lubna Arkan Younis Emails: LubnaArkanYounis21@gmail.com
8. Course Objectives

At the end of the year, the student will be familiar with the following matters: 1. Introducing the student to the basic principles related to parasites. 2. The teaching of this course aims to introduce topics on practical foundations that include the process of mechanisms of occurrence of parasitic infections, the disorders that occur, and the diseases resulting from these disorders. 3. The student becomes familiar with normal forms and parasitic infections, as well as the student's knowledge of normal and abnormal values (pathological conditions), as well as teaching the student the correct diagnosis that leads to an increase or decrease in these values.	• ..... • ..... • .....

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	Unit or subject name	Required Learning Outcomes	Hours	Learning method	Evaluation method
1 2 3 4 5 6 7 8 9 10 11 12 13 14	-Methods of identifying parasites -the primary division -the ciliates class - the ciliate class (Planadium)the dinoflagella class (Giardia) - the complement of the dinoflagellatesLeishmania a Tribosomas - the sporozoites the life cyc of malaria - First month exam - Toxoplasma conidia - flatworm cycle - external appearance of hepatic worm - blood inhalers - complement of Masonic a Japanese Tapeworms - nematodes - Ascaris worms - second month exam	1- Providing students with analysis skills. 2- Informing students about the most important modern source in the field of parasitology.	3hours	1-Learn the ability to understand and assimilate 2- Learn the ability to remember 3- Learn the ability to connect and deduce	Weekly, monthly, daily, written and end-of-semester exams.

11. Course Evaluation

The distribution is as follows: 15 marks for monthly and daily exams for the semester. 15 marks for final exams

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	-Parasitology: An Integrated Approa (New York Academy of Sciences) 2 Edition: Publisher (Wiley), Publicati date: July 12, 2022.
Main references (sources)	-Parasitic Diseases 7th Editi Publisher (Wiley), Publication da May 6, 2019
Recommended books and references (scientific journals, reports...)	-Parasitology: An Integrated Approa (New York Academy of Sciences) 2 Edition: Publisher (Wiley), Publicati date: July 12, 2022.
Electronic References, Websites	https://scholar.google.com/

Ministry of Higher Education and Scientific Research
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Accreditation Department

Academic Program and Course Description Guide

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: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبلا
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.د. حسن فارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق علوان محمد
معاون العميد للشؤون العلمية

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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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	45		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 Engineering – practical	theoretical	practical
			2	3

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	Informing students about the importance of genetic engineering and how to manipulate genetic material in a way that is consistent with the goals for which this science was created
Skills	
Learning Outcomes 2	Expanding students' skills in how to manipulate genetic material, the foundations of selecting target DNA and cloning vectors, and interpreting the results of the operation of cutting enzymes used in genetic engineering.

Ethics	
Learning Outcomes 4	Developing students' abilities to teach the principles of safe, practical genetic engineering that adheres to the principles of sound scientific research that seeks to develop and not exploit this knowledge to harm humanity or other living organisms.

9. Teaching and Learning Strategies

At the end of the semester for this course, the student is expected to

1- Explaining the scientific material by reading practical experiments, clarifying them theoretically, and then carrying them out practically.

2- Write a review paper for each student after completing the laboratories for the purpose of writing a summary of what they did during the laboratory

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 teacher	Biology	Molecular biology			Staff	

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
Basic Methods Genteic Enginneering, Biotechnology and Genetic Engineering Methods

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
2025/2026 4 th stage		Genetic Engineering	Basic		-				-				-		

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

Course Description Form

1. Course Name:
Genetic Engineering
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
14/ 02/ 2026
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: Mohammed khatab omer Email: mohammed.k.omer@tu.edu.iq
8. Course Objectives
The academic program aims to give a clear and comprehensive picture of the genetic engineering curriculu for fourth-year students in life sciences, as well as knowledge of the curriculum vocabulary and the method used in teaching, preparing competent and specialized staff in the field of genetic engineering in Iraq.
9. Teaching and Learning Strategies

Strategy	1- A strategy for teaching the basics of laboratory work regardi extracting genetic material and selecting cloning vectors and cutti enzymes used in genetic engineering experiments. 2- A strategy for strengthening the principles of cooperation and jo work for the purpose of conducting experiments

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		**Genetic Engineerin**	After the end of this semest students will be provided w sufficient ability and knowled to manipulate genetic mater methods for selecting vect for cloning, and methods introducing recombined D into host cells.	Weekly, monthly, da written a end-of-semester exams.

11. Course Evaluation

Total marks 15%
It will be like this:
10 monthly exam marks
1.5 weekly attendance marks
1.5 marks daily exams
Two degrees reports

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Basic Methods Genteic Enginneering, Biotechnology and Genetic Engineering Methods
Recommended books and references (scientific journals, reports...)	
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 3/5/2023 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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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: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبلة رئيس قسم علوم الحياة كلية العلوم

Head of Department Name:

Date:

جامعة تكريت - كلية العلوم - قسم علوم الحياة Department of Biology Tikrit University - College of Science

Signature: أ.م.د. فراس فارس رجا معاون العميد للشؤون العلمية والدراسات العليا

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: 5/9/2025

Signature:

الأستاذ الدكتور عبد الخالق [illegible] محمد

Approval of the Dean

1. Program Vision

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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?

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
2025/2026		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/ 9/ 2026
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.	• ..... • ..... • .....

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 2 2 2 2 2 2 2 2 2 2 2 2 2	1- Providing students with th skill of detectior 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/

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

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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: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبد
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.م.د. عباس فارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق سلمان المحمدي

Approval of the Dean

Approval of the Dean

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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.

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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.

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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	
			theoretical	practical
4		Pathological analysis		

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
2023/2024		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/ 2026
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 wi the following: The student's ability to identify the types environmental pollution– air pollution, water polluti soil pollution– and know the most important pollutai their causes and methods of treatment or reduce th and to identify the changes that occur when develop various diseases.about the science of patholog analyzes and the normal and abnormal ranges, addition to the changes that occur when infected v 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 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.	Pollution	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)	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/

Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
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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.

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: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبد
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.د. عباس فارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق عباس محمد

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? 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	yes			

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

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
4		parasitology	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 parasitology

2- - The teaching of this course aims to cover topics on theoretical foundations that aim to identify pathogenic parasites.

3- Giving the student an expanded idea and conversation about parasitology, the most important diseases resulting from it, and methods of diagnosing and treating them.

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	Parasitology			/	

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

-Ghosh, S. (ed.), (2018). Paniker's textbook of medical parasitology. Jaypee, brother Medical publ.,India;256pp

-Sastry, A. S. and Bhat, S. (2014). Essentials of medical parasitology1" edn., Jaypee Brothers, Medical Publishers Pvt. Ltd. Bangladesh.356pp

-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.

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		Parasitology	Basic												

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

Course Description Form

1. Course Name:
parasitology
2. Course Code:
3. Semester / Year:
4/8
4. Description Preparation Date:
14/2/2026
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 wi be familiar with the following: 1. Introducing the student to the basic principles related to the parasitology method. 2. Teaching this course aims to provide th student with sufficient knowledge about the general characteristics of animal grou that are parasitic on humans, their classification, and to identify the different parasitic species in terms of their characteristics, internal structure, life cyc pathological and epidemiological aspects them, methods of diagnosing their infection, as well as determining their geographical spread globally and method of control, treatment and prevention. Of which .	• ..... • ..... • .....

3. Providing the student with information about the general characteristics of anima groups parasitic on humans and their classification. 4. Identify the various intrusive species terms of their phenotypic characteristi internal structure, life cycle, pathologi and epidemiological aspects, methods diagnosing their infection, as well determining their geographical spre globally and methods of control a treatment.	

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	Providing students with analysis skills. 2- Informing students out the most important modern urces in e field of heoretical rasitology	parasitology	1-Learn the ability to understand l assimilate - Learn the ability to remember Learn the ity to nect and deduce	Weekly, monthly, daily, written d end-of-emester 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)	berts, L. S. ; Janavy, J. JR. and Nadlers S. 13). Gerald D schmidt and larry S. Robents" ndations of Parasitolegy, edh., Mc Grwo-Hill comPanies, Inc ., United states : 670 PP
Main references (sources)	Gillespie, S. H., & Pearson, R. D. (Eds.). (2001). Principles practice of clinical and parasitology (pp. 214-241) Toronto: Wiley.
Recommended books and references (scientific journals, reports...)	Ghosh, S. (ed.), (2018). Paniker's textbook of Jaypee, brother Medical .medical parasitology publ.,India;256pp. Sastry, A. S. and Bhat, S. (2014). Essentials of medical parasitology1"' edn., Jaypee Brothers, Medical Publishers Pvt. Ltd. Bangladesh: 356pp.
Electronic References, Websites	https://www.researchgate.net/ https://scholar.google.com/schhp?hl=

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

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

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

Academic System: .....Semesters .....

Description Preparation Date: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبد
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.د. فراس هاشم رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق علوان محمد

Approval of the Dean

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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**
Practical lectures and conducting experiments in the laboratory

5. **Other external influences**
Illustrations and PowerPoint

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	
			theoretical	practical
2023-2024/second		Practical invertebrates		
				3

8. Expected learning outcomes of the program

Knowledge	
Learning Outcomes 1	A1- Reviews the basic scientific concepts in invertebrate science A2- Introducing students to the most important types of invertebrates that infect humans and animals A3- Explain the taxonomic, morphological, structural and biological characteristics of invertebrate animals A4- Explains the relationship between the structural structure of invertebrate animals and the characteristics of the surrounding environment in which they inhabit A5- It distinguishes the external appearance and internal and tissue structures in the organism's body and the different stages of growth and development A6- Informing students about the most important laboratory

	devices and solutions used to diagnose worms in the laboratory A7- Identify living organisms related to the specialty and classify them following the scientific method A8- He raises awareness in his community about invertebrate animals and their impact on the environment and living organisms
Skills	
Learning Outcomes 2	B1 – Knowing students' ability to make slides of models of invertebrates B2 – He employs the scientific and laboratory skills and knowledge he acquired during his study of this science in positive interaction with the objects of the surrounding environment. B3- Practicing awareness of his invertebrate community and its impact on the environment and organisms around it B4- It uses modern techniques and programs available that consolidate and develop the concepts of this science
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 matters:

1- Introducing the student to the basic principles related to invertebrate science

2- – Explains the taxonomic, morphological and structural characteristics of invertebrate animals

3- To explain the relationship between the structural structure of an invertebrate animal and the characteristics of the surrounding environment in which it inhabits

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 teacher	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

1- Prescribed methodological books

2- Approved websites and the virtual library

3- Scientific sources/parasitology

14. Program Development Plan
1- Including topics that are consistent with the modernity and requirements of scientific and practical life and what scientists have achieved on an ongoing basis 2- Use laboratory equipment with high specifications

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		Invertebrates	Basic	*					*					*		

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

Course Description Form

1. Course Name:
Invertebrates
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
14/3/ 2026
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: Lubna Arkan Younis Email: Lubnaarkanyounis21@gmail.com
8. Course Objectives
At the end of the year, the student will be familiar with the following: **1- Reviews the basic scientific concepts and knowledge in invertebrate science** **2- Explains the taxonomic, morphological, structural and biological characteristics of invertebrate animals** **3- Explains the relationship between the structural structure of invertebrate animals and the characteristics of the surrounding environment in which they inhabit** **4- Explains the relationship between invertebrate animals and their environments** **5- Knows the morphological and taxonomic characteristics of invertebrate animals in the laborato**
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	1- Providing students with t skill of diagnosi and distinguishi between types invertebrates 2- Informi students abo modern sourc in the field invertebrate science	Order of dinoflagellates -Arcella -Actinospheric - Different type of hollow - CranchiaSpong - First month's exam - Cnidarians (Hydra) - Trichophytes (Planaria) annelid worms (earthworms) jawed leeches (medical leeches) - Ascaris worms Arthropods (Daphnia and Cyclopes) - Helix, Octupus gastropods second month exam	1-Learn the abil to understand a assimilate 2- Learn t ability remember 3- Learn t ability to conn and deduce	Weekly, monthly, da written a end-of-semester exams.

11. Course Evaluation

The distribution is as follows: 15 marks for monthly and daily exams for the semester. 15 marks for final exams

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	The final prescribed book - -
Main references (sources)	الحسيني احمد حماد,دميان امين شنودة(1994). بيولوجية الحيوان العملي(الجزء الثاني). دار المعارف جمهورية مصر العربية
Recommended books and references (scientific journals, reports...)	كتاب علم الطفيليات /أ.د ابراهيم شعبان وأ.د بندر الراوي
Electronic References, Websites	https://www.researchgate.net/ https://microbenotes.com/phylum-mouhhusa

Ministry of Higher Education and Scientific Research
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Academic Program and Course Description Guide

2025

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

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Description Preparation Date: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عجلة
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.م.د. هواس فارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
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Approval of the Dean

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

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Description Preparation Date: 5/10/202

File Completion Date: 2026/02/14

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:

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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

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. 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

No

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	1	3		Essential
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	
4		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 **Cell biology** 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 basics related to cell biology 2- Teaching the course aims to cover topics in scientific and practical foundations that include mechanisms for detecting cell components

3 - The student becomes familiar with the vocabulary of the practical aspect, the most important tools used in cell biology, and learns about practical experiments

4- Giving the student an encyclopedic and modern idea about cell biology, in addition to the changes that occur when performing experiments and the

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	Medical genetics			/	

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
-Bolsover et al.,(2003). CELL BIOLOGY A Short Course. SECOND EDITION. - CASARETT AND DOULL'S(2008). TOXICOLOGY. THE BASIC SCIENCE OF POISONS. Seventh 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
2023/2024		Pathological analysis	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:
4/8
4. Description Preparation Date:
14/ 02/ 2026
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: noorrassamkamil Email: noor.kamil23@tu.edu.iq
8. Course Objectives

At the end of the year, the student will be familiar v the following: 1- Introducing the student to the basics related to biology 2- Teaching the course aims to cover topics scientific and practical foundations that incl mechanisms for detecting cell components 3 - The student becomes familiar with the vocabu of the practical aspect, the most important tools u in cell biology, and learns about practical experime 4- Giving the student an encyclopedic and mod idea about cell biology, in addition to the changes occur when performing experiments and the	• ..... • ..... • .....

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	1 **Understanding the topic of lectures With a monthly or daily exam** **– Familiarize students With new laboratory equipment that enables them acquire new skills information**	1_Compound lig microscope 2_ Expression o solutions and concentrations 3_ The process separating organelles and cell component 4_Detecting the components of the plant cell wa 5_ Conduct experiments 6_ Monthly exar 7_ Plasma membrane 8_ core 9_ cell shapes + daily exam 10_ Crystals and their types 11_ Plastids and their types 12_ Conducting experiments 13_th second month exam	**1-Explanatio the scientific material** **2- Writing an drawing illustrations the blackboa** **3- Linking previous lectures with the current lecture.**	Weekly, monthly, daily, writt and end-semester exams.

11. Course Evaluation

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

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Bolsover et al.,(2003). CELL BIOLOGY A Short Course. SECOND EDITION.
Main references (sources)	- CASARETT AND DOULL'S(2008). TOXICOLOGY. THE BASIC SCIENCE OF POISONS. Seventh Edition.
Recommended books and references (scientific journals, reports...)	
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 3/5/2023 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: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبلا
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.م.د. فراس هارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق محمد

Approval of the Dean

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
2023/2024		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/ 2026
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 wi the following: The student's ability to identify the types environmental pollution– air pollution, water polluti soil pollution– and know the most important pollutar their causes and methods of treatment or reduce th and to identify the changes that occur when develop various diseases.about the science of patholog analyzes and the normal and abnormal ranges, addition to the changes that occur when infected v 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 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.	Pollution	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)	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/

Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
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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: 5/9/2025

File Completion Date: 14/2/2026

Signature: أ.م.د. ايمن عدوان عبلا
رئيس قسم علوم الحياة
كلية العلوم

Head of Department Name:

Date:

Signature: أ.م.د. فراس هارس رجا
معاون العميد للشؤون العلمية
والدراسات العليا

Scientific Associate Name:

Date:

جامعة تكريت - كلية العلوم
قسم علوم الحياة
Department of Biology
Tikrit University - College of Science

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 5/9/2025

Signature:

الأستاذ الدكتور
عبد الخالق علوان محمد

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
2023/2024		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/ 9/ 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 wit **the following:** **1- Introducing the student to the basic principles related to biodiversity** **2- To classify the needs to develop the practical real of 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 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 Biodiversity	Biodiversity	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)	/
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/