Knowledge UNIVERSITY	Kurdistan Region – Iraq Ministry of Higher Education and Scientific Research Knowledge University	

MODULE DESCRIPTOR FORM

Module Information			
Course Module Title	**Toxicology**		
ناونیشانی مۆدیول	**تۆکسیکۆلۆجی**		
عنوان الوحدة	علم السموم		
Course Module Type	**Core**	**Module Code**	**Paan 802**
ECTS Credits	**3**	**Module Level**	**4th Level**
Semester of Delivery	**8th**	**Dept. Code**	**DMLS**
College (Code)	**CSC**		
Module Website (CMW)	**Knu.edu.iq/sms**		
Module Leader (ML)	**Dhary Alewy Almashhadany**	**e-mail**	**dhary.alewy@knu.edu.iq**
ML Acad. Title	**Professor**	**Qualification**	**PhD**
ML ORCID	https://orcid.org/0000-0003-4346-6532		
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Peer Review Name	**Prof Salah Mahdi Saleem**	**e-mail**	**Salah.mahdi@knu.edu.iq**
Reviewer Committee Approval	**12/01/2023**	**Version Number**	**1.0**

Relation With Other Modules	
Pre-requisites	N/A
Co-requisites	N/A
Module Aims, Learning Outcomes and Indicative Contents	
Module Aims	The aim of this module is to: 1- Understand the factors influencing toxicity and sources of poisoning. 2- Comparing different types of Toxicants. 3- Recognize the organ toxicity (Hepatotoxicity; Nephrotoxicity etc.). 4- Study the main topics in Environmental Toxicology.
Module Learning Outcomes	At the end of this module students will be able to: 1- Know the toxicology, toxicants, and toxins. 2- Students can easily discuss the classification of toxicology. 3- Students able to discuss the principles of toxicology. 4- Description of the analytical and other methods of toxicology
Indicative Contents	This module covers a wide range of bacteria including Classification of Toxicants, Fetal Toxicology, Hepatotoxicity, Nephrotoxicity, Environmental Toxicology, Toxic Metals, Toxicity of Food Additives, and Toxins (Microbial, Mycotoxins, Plant, Animals).
Learning and Teaching Strategies	
Strategies	Students do not learn unless they actively apply their new knowledge. Getting students to use the material from a course is probably the most critical thing an instructor can do. It is even more critical that readers engaged in self-study make themselves do exercises and read the text. Laboratory exercises, homework assignments, and in-class problems are excellent ways to get students to use knowledge.

Module Delivery	
Structured workload (h/w)	5 hr/w
Unstructured workload (h/w)	8 hr/w
Total workload (h/w)	13 hr/w

Module Evaluation				
	Number/Time	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Class activity	Weekly	10%	Weekly	Students will demonstrate an understanding of the core concepts of the science of toxicology.
Project/Lab.	4	10%	3, 5. 9, 12	Students will be able to identify and discuss contemporary issues in toxicology.
Midterm Exam	1 hr	20%	7	Students will be familiar with technical aspects and experimental approaches in toxicological research, testing and risk assessment.
Final Exam	3 hr	60%	15	Knows how exposure limits and standards are derived
Total	100% (100 Marks)			

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	A TEXTBOOK OF MODERN TOXICOLOGY	available online
Recommended Texts	A Small Dose of Toxicology 3rd Edition	available online
Websites	http://pustaka.unp.ac.id/file/abstrak_kki/EBOOKS/A%20textbook%20of%20Modern%20Toxicology.pdf	

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Principles of Toxicology

Week 2	Classification of Toxicants
Week 3	Fetal Toxicology
Week 4	Hepatotoxicity
Week 5	Nephrotoxicity
Week 6	Toxicology of Nervous system
Week 7	**Mid-Term Exam**
Week 8	Environmental Toxicology
Week 9	Toxic Metals
Week 10	Toxic Effects of Pesticides
Week 11	Toxicity of Food Additives
Week 12	Toxins (Microbial, Mycotoxins, Plant, Animals)
Week 13	Transport and Fate of Toxicants in Environment
Week 14	Guidelines on the prevention of toxic exposures
Week 15	**Final Exam**

APPENDIX:

KNOWLEDGE UNIVERSITY					
GRADING SCHEME					
Group	**ECTS Grade**	**% of Marks**	**Definition**	**IRQ System**	**GPA**
Success Group (50-100)	**A -** Excellent	Best 10%	Outstanding Performance	90-100	**5**
	B - Very Good	Next 25%	Above average with some errors	80-89	**4**
	C - Good	Next 30%	Sound work with notable errors	70- 79	**3**

	D - Satisfactory	Next 25%	Fair but with major shortcomings	60-69	**2**
	E - Sufficient	Next 10%	Work meets minimum criteria	50-59	**1**
Fail Group (0–49)	**FX –** Fail	(45-49)	More work required but credit awarded	40-49	
	F – Fail	(0-44)	Considerable amount of work required	0-44	

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. KNU has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.