بسم الله الرحمز الرحيم

وزارة التعليم العالي والبحث العلمي رئاسة جامعة الموصل قسم ضمان الجودة والأداء الجامعي

العدد : ٩ / ٨٨ /

التاريخ: / / ٢٠٢٤

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Date:

Msster in Pharmacology الم البرنامج Pharmacology Pharmacology and Toxicology Department Name Program ID		
Master in Pharmacology, Program name Pharmacy Pharmacy Pharmacy Pharmacy Pharmacy Pharmacy Pharmacology and Toxicology Program URL Masters Study Level Pharmacology On campus Pharmacology, toxicology, and Biomedical Sciences Pharmacology Pharmacology Main Subject Pharmacology Pharmacology Pharmacology Main Subject Pharmacology Program Overview The Master's program in Pharmacology is a comprehensive two-year curriculum designed to offer advanced scientific knowledge in pharmacological sciences, toxicology, clinical applications, and research methodologies. Below is an overview of the program, organized by semester: Vear One: Foundation Courses Pharmacology Pharmacology Pogram name Program URL Program URL Program URL Study Level Course Intensity Study Mode Amater Study Level Study Mode Amater Study Level Study Level Study Mode Amater Study Level Study Mode Amater Study Level Study Level Study Level Amater Study Level Study Level Study Level Amater Amater Study Level Amater Study Level Amater Study Level Amater Amater Study Level Amater Amater Study Level Amater		تفاصيل البرنامج الواحد
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- MBA Program Type - Pharmacology, toxicology, and Biomedical Sciences - Pharmacology Main Subject Area - Pharmacology Main Subject - Custom Subject - Pharmacology Pharmacology Specialization - Program Overview - The Master's program in Pharmacology is a comprehensive two-year curriculum designed to offer advanced scientific knowledge in pharmacological sciences, toxicology, clinical applications, and research methodologies. Below is an overview of the program, organized by semester: - Year One: Foundation Courses		مستوى الدر اسة Study Level
- MBA Program Type - Pharmacology, toxicology, and Biomedical Sciences - Pharmacology Main Subject Area - Pharmacology Main Subject - Custom Subject - Pharmacology Pharmacology Specialization - Program Overview - The Master's program in Pharmacology is a comprehensive two-year curriculum designed to offer advanced scientific knowledge in pharmacological sciences, toxicology, clinical applications, and research methodologies. Below is an overview of the program, organized by semester: - Year One: Foundation Courses		نوع الكورس Lourse Intensity
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research methodologies. Below is an overview of the program, organized by semester: Year One: Foundation Courses	knowledge in pharmacological sciences,	
overview of the program, organized by semester: Year One: Foundation Courses	toxicology, clinical applications, and	
semester: Year One: Foundation Courses	research methodologies. Below is an	
Year One: Foundation Courses	overview of the program, organized by	
	semester:	
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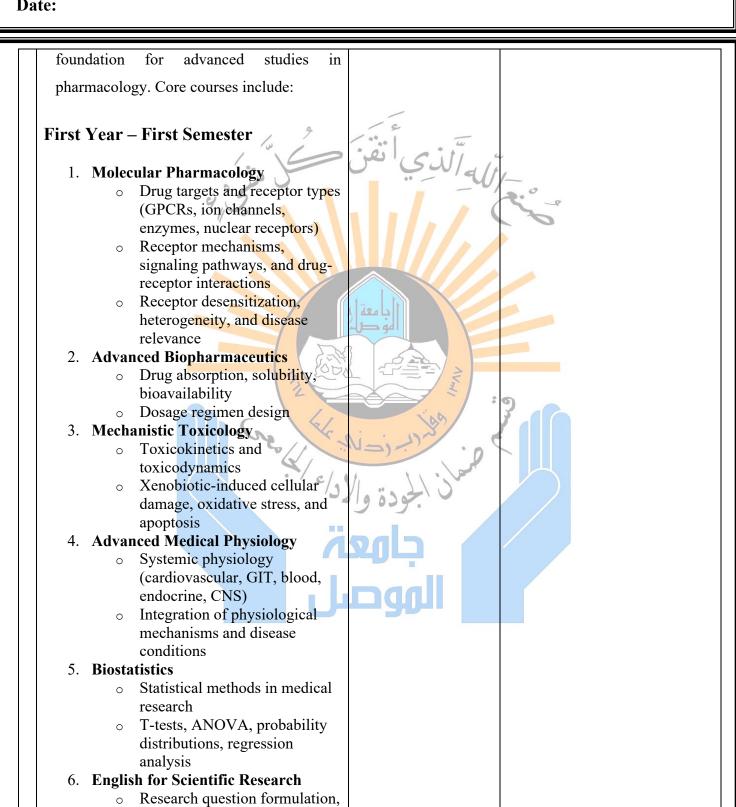
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وزارة التعليم العالي والبحث العلمي رئاسة جامعة الموصل قسم ضمان الجودة والأداء الجامعي

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Date:

source engagement

 Scientific writing, citation practices, and bibliography management

7. Advanced Pathophysiology

- Inflammation, hemodynamic disorders
- Cardiovascular and endocrine pathophysiology

First year-Second semester and the Second year: Specialization and Research

The second semester and the second years enable students to specialize in areas of interest and participate in research activities. Key courses include:

First Year – Second Semester

- 1. Advanced Pharmacology I
 - Autonomic drugs, cardiovascular and renal drugs
 - Agents acting on smooth muscle, chemotherapeutics, vasoactive peptides, NO
- 2. Advanced Systemic Toxicology
 - Risk assessment, carcinogenesis, developmental and reproductive toxicology
 - Toxicity testing, system biology in toxicology
- 3. Advanced Pharmacokinetics and Drug Metabolism I
 - Orug absorption, metabolism (Phases I & II), pharmacogenomics
 - Role of cytochrome P450, pharmacodynamics, dose-time



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relationships

4. Advanced Clinical Biochemistry

- Metabolic disorders, advanced hepatic and renal function in pharmacology
- Endocrine disorders

 (hypothalamus, pituitary, thyroid, gonads) with pharmacological correlations
- Biochemical basis of druginduced organ toxicity and therapeutic monitoring
- Molecular biomarkers in inflammation, cancer, and metabolic syndrome
- Omics-based approaches and precision diagnostics in clinical pharmacology

5. Research Methodology

- Study design, sampling, data collection, literature review
- Scientific writing, journal selection, referencing, plagiarism awareness

6. Special Problem (Practical)

Selected current topics in pharmacology (practical application)

7. Seminar

 Student-led presentation and discussion of selected pharmacology topics

Research Component

In the second year, students undertake a structured research component that includes practical work, seminars, and formal training in research methodology. Under the



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supervision of a faculty mentor, student develops and executes independent research project. This work typically culminates in the preparation of a thesis or a comprehensive research report, which is presented and defended before an academic panel. Research topics may span various areas of pharmacology toxicology, including drug metabolism, toxicological risk 🧢 assessment, pharmacokinetics, or the evaluation of therapeutic agents. The research component is designed to enhance students' critical and scientific data analysis, communication skills.

Program Outcomes of Master of Science in Pharmacology

1. Knowledge

Graduates will be able to:

- Demonstrate in-depth understanding of the principles and mechanisms of pharmacology, toxicology, pharmacokinetics, and pathophysiology.
- Describe advanced concepts in drug action, receptor signaling, biotransformation, and toxicological assessment.

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• Apply scientific and regulatory knowledge relevant to drug discovery, development, and safety evaluation.

2. Cognitive Skills

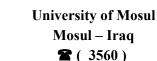
Graduates will be able to:

- Critically evaluate scientific literature and experimental data in pharmacological and toxicological sciences.
- Design and execute independent research projects using appropriate scientific methodology and statistical analysis.
- Integrate theoretical and practical knowledge to solve complex problems related to drug efficacy, toxicity, and therapeutic use.

3. Interpersonal Skills and Responsibility

Graduates will be able to:

- Demonstrate professional and ethical responsibility in research and practice, including adherence to publication ethics and safe laboratory conduct.
- Work effectively both independently and as part of a multidisciplinary team in academic, clinical, or industrial settings.
- Reflect on their learning and research practices to support continuous professional development.
- 4. Communication, Information Technology, and Numerical Skills



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Graduates will be able to:		
 Communicate scientific information clearly and effectively through written reports, oral presentations, and visual data. Utilize modern information technology tools for literature search, data analysis, and scientific documentation. Apply appropriate biostatistical techniques for data interpretation in pharmacological and toxicological research. 	الدي أنفن	
5. Psychomotor Skills (if applicable)	الوقط	
Graduates will be able to:		
 Perform laboratory techniques relevant to pharmacological and toxicological investigations with precision and safety. Operate analytical and diagnostic 	المالية المالي	
instruments commonly used in	الجودة والا	
biomedical and pharmaceutical laboratories.		
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/https://uomosul.edu.iq/en	University Official وني Website	موقع الجامعة الالكتر
pgaffairs.ph@uomosul.edu.iq		بريد الكتروني للاست
1. What are the admission requirements for		خمسة اسئلة عن البر
the Master's program in Pharmacology?		
2. What are the core and elective courses		
offered in the program, and how do they prepare students for their future careers?		
3. What research opportunities are available		
to students, and how can they get involved		
in ongoing projects or initiate their own		

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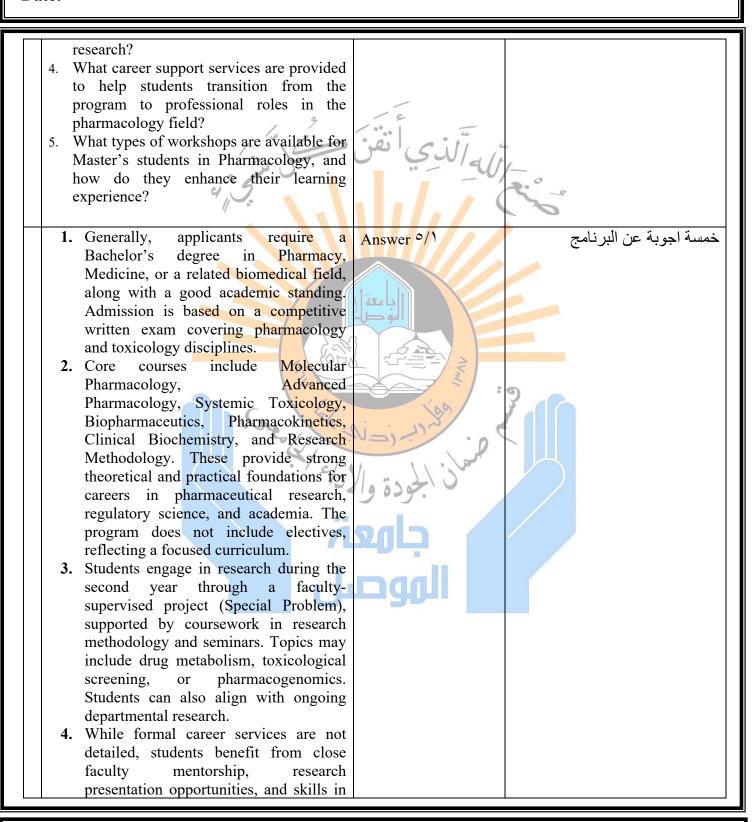
وزارة التعليم العالي والبحث العلمي رئاسة جامعة الموصل قسم ضمان الجودة والأداء الجامعي

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scientific writing and publishing— preparing them for roles in industry, academia, or PhD programs. 5. Master's students participate in structured workshops embedded within courses, such as biostatistics, scientific writing, lab skills, and research ethics. These enhance their analytical, communication, and technical competencies.	الوحدات Duration Unit:
1st semester: 13 unit	Duration Unit: الوحدات
2 nd semester: 13 unit	Duration Type نوع البر نامج
Years -	
September the 1 st	بداية البرنامج (شهر) - Start Month - Application Deadline موعد انتهاء التقديم للبرنامج
شهر ۲ . ۲ سنة ۲ ، ۲ ، ۲	
Iraqi Dinar (IQD)	Fees Currency: alaski
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For Iraqi students: 3.500.000 IQD Per year	معلومات الاجور
For international Students: 1.500.000 - 3.000.000 IQD Per year	
1.300.000 - 3.000.000 IQD 1 ci year	Entry Requirementsمتطلبات الدخول للكورس
Admission to the Master's in Pharmacology	Exam Type: المتحان Exam Type:
and Toxicology program is based on a	
general competitive written examination	Paper-based Exam
that evaluates applicants' foundational knowledge across core areas of	
pharmaceutical and biomedical sciences. The	
exam is designed to ensure that candidates	
possess the academic background necessary	
for success in advanced pharmacological and toxicological studies. It typically includes	
content from the following subjects:	
Pharmacology	
• Toxicology	
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The exam may consist of multiple-choice	
questions (MCQs), short-answer, and/or	
essay-type questions , with emphasis on	
critical thinking, problem-solving, and	/c
application of scientific knowledge.	(· · · · =
Graduation Certificate	تطلبات اخرى Entry Requirements
Nomination Letter from the applicants' Job	(Other):
1.750.000 IQD Per Year	لحد الأدنى لإجمالي الرسوم الدراسية Min Total Tuition
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1.750.000 IQD Per Year	
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3.000.000 IQD Per year	
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Iraqi Dinar (IQD)	لرسوم الدراسية - العملة : Tuition Fee - Currency
NO	هل يتعين على المرشحين Are candidates require
	to submit references or قديم مراجع أو خطابات
	letter(s) of يوصية للقبول؟
	recommendation for
	acceptance?
NO	هل يتعين على المرشحين Are candidates
	قديم مقال (مقالات) للقبول (بر و بو ز ال required to submit an قديم مقال
	essay (s) for acceptang
2 years	لحد الأدنى من الخبرة المهنية (بالسنو Minimum Professiona
	Experience (in years):
	Financial Aidالدعم المالي

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وزارة التعليم العالي والبحث العلمي رئاسة جامعة الموصل قسم ضمان الجودة والأداء الجامعي

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N. 4. 19 11	financial aid?
Not applicable	Annual school budge ميز انية الكلية او القسم السنوية لجميع
	scholarships: الدراسية:
Not applicable	Currency: "W/ land is larger land in the land in the land is larger land in the land in th
Not applicable	معلومات المنحة Scholarship Informatio
	Program Statistics احصائيات البرنامج
	Students per Class : الطلاب لكل فصل :
	Average age (in years):
	متوسط سنوات الخبرة Average years of work
	في العمل على المستوى experience at managerial
	Theres, I.d.
Gall Control	الإداري: Percentage of international
1000	students
2	Percentage of women:
	(10)
50 and more	معدل درجات التخرج Average GMAT score for
8/1/0	Your cohort :
1,500,000	
1,500,000	Average salary after متوسط الراتب بعد
	graduation : : التخرج : Percent employment after
Variable	
	graduation : التخرج: Program accreditations : اعتمادات البرنامج
-	Program accreditations : اعتمادات البرنامج
	(الاعتمادية)
2	متوسط الخبرة العملية Average work experience
	(in years): (بالسنو ات):
i	Number of nationalities in عدد الجنسيات في وجبة التخرج
	current cohort : د ي ي د
	ي . Campus Details تفاصيل الكلية او القسم
كلية الصيدلة / فرع الأدوية و السموم	Institution Profile Name اسم الكلية او القسم
	Display:
2025	Foundation Year : سنة التأسيس

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1st semester

Subject	Unit
Molecular Pharmacology I	2
Advanced Biopharmaceutics I	2
Mechanistic Toxicology	2
Advanced Medical Physiology	2
Advanced Pathophysiology II	2
Biostatistics	1
English Language	2

Subject	Unit

Mark	Grade
90-100	Excellent
80-89	Very good
70-79	Good
60-69	Fair
50-59	Pass
0-49	Fail

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Advanced Pharmacology I	2
Advanced Systemic Toxicology	2
Advanced Clinical Pharmacokinetic and Drug	2
Metabolism I	
Advanced Clinical Biochemistry I	25
Special Problem Scientific Research	
	Pass Thesis: Units: 10
Seminar	Pass
·Crock/s	المع من المودة والاد
	جارعة
	الموصير