



Yarmouk University

**Faculty of  
Pharmacy**

## Master's in Technology in Pharmaceutical Development and Practice

### Program Overview

The Master's Program in Technology in Pharmaceutical Development and Practice is a unique program in Jordan as it focuses on various forms of pharmaceutical practice, whether clinical, behavioral, in community pharmacies, or in the industry. It also focuses on drug development, design, manufacturing, and the effective and safe use of medications in patient care.

New specializations in modern technologies in pharmaceutical development or practice have been introduced, integrating and linking the fields of pharmaceutical technology, drug design, and discovery with specialized and modern courses under the framework and concept of pharmaceutical development. It also covers the optimal use or practice of medications in patient care under the concept of pharmaceutical practice, whether clinical, behavioral, industrial, or otherwise. It should be noted that there is no comprehensive pharmaceutical practice program in Jordanian universities, although some programs offer courses related to clinical pharmacy, which is a part of pharmaceutical practice. However, there is a lack of programs that offer courses in industrial practice or the use of behavioral and social aspects in practice.

## Program Objectives

The Technology in Pharmaceutical Development and Practice program aims to prepare graduates in the field of Pharmaceutical Development Technology and Practice who are competent and capable of advancing the pharmaceutical profession, scientific research, community service, and meeting labor market needs.

The program also aims to equip students with experience and skills in modern techniques used in drug development, design, manufacturing, and optimal medication use in patient care. Additionally, it aims to build and develop the scientific and research capacities of faculty members and pharmacy students, enhancing the competitiveness of Yarmouk University Pharmacy graduates in competing for limited job opportunities in pharmaceutical sectors such as industry, development, and best practices in patient care, especially in a crowded job market with many bachelor's degree holders and the absence of this specialization in other universities.

Through the inclusion of specialized and modern courses in development, manufacturing, design, and artificial intelligence in pharmacy, as well as industry-approved practices, the college aims to build research cooperation bridges with the pharmaceutical industry sector in Jordan. This will facilitate finding innovative solutions, commercial products, applications, or patents to address pharmaceutical industry and therapeutic challenges.

## Program Importance

The program differs from master's programs at other universities by focusing on modern techniques used in drug development. It covers new fields and courses not previously offered, such as good practice in pharmaceutical manufacturing, digital technology in drug development, nano-biotechnology, molecular modeling in drug design and discovery, advanced practice, and modern applications in practice and research methodology using behavioral and social aspects in pharmaceutical practice. There is a scarcity of academic and research institutions in these specializations, and they are not available elsewhere.

## Targeted Groups and Accepted Majors

Applicants must hold a Bachelor's degree in Pharmacy or Doctor of Pharmacy and meet the valid English language requirement in addition to the conditions set by the Faculty of Pharmacy and the Deanship of Graduate Studies.

## Job Areas

Graduates can work in drug development and manufacturing, as well as various forms of pharmaceutical practice, including:

1. Faculty member at pharmacy and medical colleges in local and international universities.
2. Researcher at research centers, universities, and drug delivery and synthesis laboratories.
3. Clinical pharmacist in hospitals.
4. Pharmacist in community or hospital pharmacies.
5. Pharmaceutical industry in all its departments and different drug production companies.
6. Pharmaceutical marketing.
7. Drug stores.
8. Health insurance companies.
9. Ministry of Health and the General Food and Drug Administration.

## Credit Hours and Tuition Fees

The program consists of 33 credit hours.

The tuition fee per credit hour is 150 JOD for Jordanians, and 400 US Dollars for non-Jordanians.

## Study Plan Overview

The proposed curriculum structure for the Master's program in Technology in Pharmaceutical Development and Practice, with its two tracks (thesis and comprehensive), provides students with the opportunity to choose their research field in either pharmaceutical development technology or pharmaceutical practice without restriction. Therefore, elective courses are offered in two groups: pharmaceutical development or pharmacy practice. The comprehensive track has a research orientation, containing a research project that students must complete as a mandatory requirement, distinguishing the comprehensive track of the Master's program from other Master's programs in the Kingdom.

The study plan for both tracks, thesis and comprehensive, is as follows:

For the thesis track, the plan includes 33 credit hours distributed as follows:

- 15 hours of mandatory courses.
- 9 hours of elective courses (specifying the track either in pharmaceutical development or practice).
- 9 hours for the Master's thesis.

**For the comprehensive exam track, the study plan includes:**

- 24 hours of mandatory courses (including a course named "Graduation Project," a 3-credit hour course where students work under the supervision of a faculty member on a research project, write a scientific article, or review article).
- 9 hours of elective courses (specifying the track either in pharmaceutical development or practice).
- Comprehensive exam.



## Contact Information

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