

**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**

## **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: University of Babylon**

**Faculty/Institute: College of Pharmacy**

**Scientific Department: Pharmaceuticals**

**Academic or Professional Program Name: Sciences in pharmacy**

**Final Certificate Name: Bachelor's**

**Academic System: two semesters in each academic year**

**Description Preparation Date:**

**2023- 2024**

**File Completion Date:**

**Signature:**

**Head of Department Name:**

**Date:**

**Signature:**

**Scientific Associate Name:**

**Date:**

**The file is checked by:**

**Department of Quality Assurance and University Performance**

**Director of the Quality Assurance and University Performance Department:**

**Date:**

**Signature:**

**Approval of the Dean**

## Course Description Form

1. Course Name:	
Physical pharmacy	
2. Course Code:	
2 / 22	
3. Semester / Year:	
Second semester/ second year	
4. Description Preparation Date:	
17/2/2024	
5. Available Attendance Forms:	
Class attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
45credit hours /4 units	
7. Course administrator's name (mention all, if more than one name)	
Assit. Prof. Asmaa Hashim Hammadi <a href="mailto:phar.asmaa.hashim@uobabylon.edu.iq">phar.asmaa.hashim@uobabylon.edu.iq</a> Prof. Fatma al-zhra jabar Assit. Prof. Mohammed Obies	
8. Course Objectives	
<b>Course Objectives</b>	1-Identifying all types and forms of medicines. 2 - Methods of preparing active ingredients in full dosage formsFor humans and animals 3 Study the stability of prepared doses in various forms 4 - Study the drug effect, effectiveness, and mechanism of action within the body.
9. Teaching and Learning Strategies	
<b>Strategy</b>	1- Theoretical lectures 2 - Educational laboratories 3- Scientific and practical research 4- Desk research

10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-4	12	Solubility and Distribution Phenomena		Lectures, discussions, seminars	Writing exam, oral evaluation
1-3	9	Chemical Kinetics and Stability	Kinetics, rate and orders of reactions, influence of temperature and other	Lectures, discussions, seminars	Writing exam, oral evaluation
1-3	9	Interfacial Phenomena	factors on reactions rate, decomposition of medicinal agents and accelerated stability analysis.	Lectures, discussions, seminars	Writing exam, oral evaluation
1-4	12	Colloidal Dispersions		Lectures, discussions, seminars	Writing exam, oral evaluation
1-3	13	Rheology		Lectures, discussions, seminars	Writing exam, oral evaluation

<b>11. Course Evaluation</b>					
The pursuit grade is divided into 20% for theory, 20% for practical, and 60% for the end-of-semester exam					
<b>12. Learning and Teaching Resources</b>					
Required textbooks (curricular books, if any)			<ol style="list-style-type: none"> <li>1. Martin's Physical Pharmacy and Pharmaceutical Sciences, 6th edition.</li> <li>2. Skoog, Skoog, Fundamentals of Analytical Chemistry, 9th edition.</li> </ol>		
Main references (sources)					
Recommended books and references (scientific journals, reports...)					
Electronic References, Websites					



## Course Description Form

1. Course Name: Bio Pharmacy	
2. Course Code: PhBi4B00044	
3. Semester / Year: semester(15 weeks)	
4. Description Preparation Date: 17/2/ 2024	
5. Available Attendance Forms: weekly lectures	
6. Number of Credit Hours (Total) / Number of Units (Total)	
3 hours , 2 units	
7. Course administrator's name (mention all, if more than one name)	
Assist. Prof. Dr. Dhafir Kahtan Saeed Assist. Prof. Dr. Aymen Amer Bash	
8. Course Objectives	
<b>Course Objectives</b>	<ol style="list-style-type: none"> <li>1. Knowledge of biopharmaceutical consideration of drugs .</li> <li>2. Understanding of pharmacokinetic behavior of drugs.</li> <li>3. biological effectiveness of the drugs inside the human body and quantification of drug concentration in normal subjects and in certain.</li> </ol>
9. Teaching and Learning Strategies	
<b>Strategy</b>	1-Improving the basic academic competence of students through scientific lectures at the same level as students in the medical group, easy to understand and understand, and equipping the halls to facilitate the use of educational technologies and creating an educational

environment for the new generation.  
 2- Improving the educational environment by making it enjoyable and free of anything that causes anxiety for students. This is done by enriching cultural and sports activities and encouraging club activities.

### 10. Course Structure

Wee	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1 theoretical	Introduction to biopharmaceutics	Introduction to biopharmaceutics	Theoretical lectures using projectors and smart boards+ Electronic platform (blended learning) + video lectures	Conducting oral exams after the lecture +Quick surprise exams Quiz + Practical reports +Homework + A monthly theoretical and practical exam + Seminars
2-4			Biopharmaceutic aspects of products; drug absorption; mechanisms of absorption; physicochemical factors; dissolution rate; effects of excipients; type of dosage forms		
5			One compartment open model		
6			Multicompartment models		
7			Pharmacokinetics of drug absorption		

8			Bioavailability and bioequivalence		
9			Clearance of drugs from the biological systems		
10			Hepatic elimination of drugs		
11			Protein binding of drugs		
12			Intravenous infusion		
13			Multiple dosage regimens		
14			Non-linear pharmacokinetics		
15			Dosage adjustment in renal diseases		

## 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)	<b>Biopharmacy</b>
Main references (sources)	Applied Clinical Pharmacokinetics , Latest Edition
Recommended books and references (scientific journals, reports...)	Shargel L, Yu AB, (Eds.), Applied Biopharmaceutics and Pharmacokinetics 6 <sup>th</sup> Edition
Electronic References, Websites	

Assist. Prof. Dr. Dhafir Kahtan Saeed  
 Assist. Prof. Dr. Aymen Amer  
 Course Name: Bio Pharmacy  
 University of Babylon / Collage of Pharmacy

## Course Description Form

<b>1. Course Name:</b>	
Pharmaceutical Technology	
<b>2. Course Code:</b>	
PhPtii3B00035 (3+2)	
<b>3. Semester / Year:</b>	
2023-2024	
<b>4. Description Preparation Date:</b>	
14/2/2024	
<b>5. Available Attendance Forms:</b>	
attendance	
<b>6. Number of Credit Hours (Total) / Number of Units (Total)</b>	
45 hours/ 4 units	
<b>7. Course administrator's name (mention all, if more than one name)</b>	
Name: Ghada Hamid Naji Email: phar.ghadah. hamid@uoba ..... bylon.edu.iq .....	
<b>8. Course Objectives</b>	
<b>Course Objectives</b>	<ul style="list-style-type: none"> <li>• Define the various types of solid, liquid and semisolid dosage forms.</li> <li>• List the advantages and disadvantages of these dosage forms in extemporaneous compounded prescriptions and in patient therapy</li> <li>• Define solubility and describe how different factors increase or decrease solute solubility in a given solvent</li> <li>• Evaluate and select a proper solvent and delivery system for a given solute, purpose, and/or patient population</li> <li>• Identify the challenges of using these various types of dosage forms.</li> <li>• select the best dosage form according to drug itself and according to disease state of the patient being treated.</li> <li>• Explain how a drug's physical characteristics influences the pharmaceutical dosage forms that will be used to administer it.</li> <li>• Compare and contrast liquid dosage forms to solid oral dosage forms and to semisolid dosage forms</li> </ul>

9. Teaching and Learning Strategies

<b>Strategy</b>	Basic Thinking Methods High thinking Development of self-capacity Brainstorming
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10. Course Structure

Week	Hou	Required Learning	Unit or subject name	Learning method	Evaluation
		Outcomes			method
1	3	Emulsions	1. List the advantages and disadvantages of using liquid dosage forms in	Lectures Boards Slide show	Exams seminars
2	3	Stability of emulsions	extemporaneous compounded prescriptions and in patient therapy 3. Compare and contrast liquid dosage forms to solid oral dosage forms 4. Define solubility and describe how different factors increase or decrease solute solubility in a given solvent	Lectures Boards Slide show	Exams seminars
3	3	Suppositories	1. Compare and contrast various suppository, insert, and stick dosage forms in terms of physical appearance, size, and shape	Lectures Boards Slide show	Exams Seminars
4	3	Preparation of suppositories	2. Describe the advantages and disadvantages of suppository, insert, and stick drug delivery versus oral drug delivery 3. Identify and explain physiologic factors that influence the drug absorption from rectal suppository and vaginal/urethral insert administration 4. Identify and explain the physicochemical factors of the drug and suppository/ insert base as these influence absorption 5. Compare and contrast the various classes of suppository/insert/stick bases. 6. Describe the three methods of suppository/insert/stick	Lectures Boards Slide show	Exams Seminars

			preparation		
5	3	Semisolid dosage forms	1. Differentiate between the various types of semisolid bases on the basis of physical and chemical properties	Lectures Boards Slide show	Exams Seminars
6	3	Preparation of ointments	2. List the criteria for the selection of a semisolid base to treat a topical affliction 3. Describe the methods to incorporate (an) active ingredient(s) into a semisolid base 4. Explain the difference between an ointment, a cream, and a gel. 5. List advantages and disadvantages of administering drugs rectally and vaginally	Lectures Boards Slide show	Exams Seminars
7	3	Powders	1. Differentiate a powder from a granule 2. Explain how a drug's powder particle size influences the pharmaceutical dosage forms that will be used to administer it 3. Define micromeritics, the angle of repose, levigation, spatulation, and trituration	Lectures Boards Slide show	Exams Seminars
8	3	Granules	1. Define granules 2. Differentiate between the fusion method and wet method for the Preparation of effervescent granulated salts	Lectures Boards Slide show	Exams Seminars
9	3	Hard gelatin capsules	1. Differentiate between hard gelatin and soft gelatin capsules 2. Compare and contrast	Lectures Boards Slide show	Exams Seminars
10	3	Soft gelatin capsules	advantages and disadvantages of hard gelatin and soft gelatin capsules 3. List categories of inert ingredients, with examples, which are employed in them compounding or manufacture of capsules 4. State USP compendial requirements for capsules	Lectures Boards Slide show	Exams Seminars
11	3	Pharmaceutical incompatibilities	1. Define pharmaceutical incompatibilities and list their types.	Lectures Boards Slide show	Exams Seminars

			2. Differentiate between their types		
12	3	Pharmaceutical aerosols	1. Define aerosols and list their types with brief description 2. List the advantages of aerosols. 3. List the main parts of aerosol system with their functions 4. Describe each type of filling operation for aerosol. 5. Differentiate between methods of filling	Lectures Boards Slide show	Exams Seminars
13	3	Tablets	1. Differentiate between the various types of tablet dosage forms. 2. Compare and contrast advantages and disadvantages of the various types of tablet dosage forms 3. List categories of ingredients, with examples, which are employed in the manufacture of compressed tablets.	Lectures Boards Slide show	Exams Seminars
14	3	Manufacturing of tablets	List the main procedures for tablet manufacturing	Lectures Boards Slide show	Exams Seminars
15	3	Stability problems of tablets	Discuss the main stability problems encountered in tablets dosage forms and describe their solutions	Lectures Boards Slide show	Exams Seminars

<b>11. Course Evaluation</b>					
Mid term exam 15+ quizzes and attendance 5+ practical 20+ 60 final exam					
<b>12. Learning and Teaching Resources</b>					
Required textbooks (curricular books, if any)					
Main references (sources)					
Recommended books and references (scientific journals, reports...)					
Electronic References, Websites					



## Course Description Form

1. Course Name:	
Physical pharmacy	
2. Course Code:	
PhPpi2B00018	
3. Semester / Year:	
First semester/ second year	
4. Description Preparation Date:	
22/2/2024	
5. Available Attendance Forms:	
Class attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
45credit hours /4 units	
7. Course administrator's name (mention all, if more than one name)	
Asmaa Hashim Hammadi    phar.asmaa.hashim@uobabylon.edu.iq	
.....	
.....	
8. Course Objectives	
<b>Course Objectives</b>	1-Identifying all types and forms of medicines. 2 - Methods of preparing active ingredients in full dosage formsFor humans and animals 3 Study the stability of prepared doses in various forms 4 - Study the drug effect, effectiveness, and mechanism of action within the body.
9. Teaching and Learning Strategies	
<b>Strategy</b>	1- Theoretical lectures 2 - Educational laboratories 3- Scientific and practical research 4- Desk research
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-3	9	States of matter	States of matter, binding forces between molecules, gases, liquids, solid and crystalline matters; phase equilibria and phase rule; thermal analysis		
1-2	6	Solutions of non-electrolytes	Solutions of non-electrolytes, properties, ideal and real colligative properties, molecular weight determination		

<b>11. Course Evaluation</b>					
The pursuit grade is divided into 20% for theory, 20% for practical, and 60% for the end-of-semester exam					
<b>12. Learning and Teaching Resources</b>					
Required textbooks (curricular books, if any)					
Main references (sources)					
Recommended books and references (scientific journals, reports...)					
Electronic References, Websites					