



Thamar University
Faculty of Medical Sciences
Department of Pharmacy



Bachelor of Pharmacy

Program Specifications

Prepared by:

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Date of preparation: 2023

1. General Information:		
1.	Program Name	Bachelor of Pharmacy
2.	Program Type	
3.	Total Credit Hours	183 Credit Hours
4.	Program Period	Five years divided into ten semesters
5.	Awarding Institution	Faculty of Medical Sciences, Thamar University
6.	Awarded Degree	Bachelor of Pharmacy
7.	Study System:	Semester based
8.	Teaching language	English
9.	Departments participating in the program:	Department of Pharmacy
10.	Location of teaching:	Faculty of Medical Sciences, Thamar University
11.	Date of current development of the program:	2023
12.	Qualification required for admission	Secondary school according to the standards of the Ministry of Higher Education and Scientific Research
13.	Prepared by	Prof. Dr. Abdulkareem Al-Zomor Assoc. Prof. Dr. Abdurrahman Alhaifi Assist. Prof. Dr. Sam Dawbaa
14.	Council Approval Date	
15.	Starting date of teaching	2023

2. Introduction:

The Bachelor of Pharmacy program is one of the leading programs in the Department of Pharmacy, Faculty of Medical Sciences, Thamar University.

This program aims primarily to provide education and training in pharmacy in an academic manner sufficient and professional, both theoretically and practically, so that students gain modern knowledge and understanding and develop their minds to be able to acquire knowledge, skills and technology in pharmaceutical sciences and drug manufacturing and provide evidence-based advice to patients and the public-on-public health problems.

Promising Jobs:

Pharmacy specialist at

- 1- Community pharmacies
- 2- Hospital pharmacies
- 3- Pharmaceutical manufacturing laboratories
- 4- Pharmaceutical factories and medical supplies
- 5- Pharmaceutical Marketing

3. University Vision, Mission, and Objectives:

University vision:

Excellence in providing educational, research and community services

التميز في تقديم خدمات تعليمية، وبحثية، ومجتمعية

University mission:

Providing distinguished educational and research services that contribute to serving the community and meeting the requirements of the labor market.

تقديم خدمات تعليمية وبحثية متميزة تُسهم في خدمة المجتمع وتُلبي متطلبات سوق العمل

University Objectives:

The university aims to:

1. Provide a distinguished educational service that provides students with knowledge and skills that meet the needs of the labor market according to quality standards and academic accreditation.
2. Encourage scientific research that effectively contributes to solving community problems.
3. Strengthen effective partnership with various universities and institutions.
4. Develop organizational frameworks and internal regulations for the university in a way that enhances its financial and administrative independence.
5. Develop and establish academic programs, infrastructure, and facilities for the university in light of academic accreditation standards.

تهدف الجامعة الى:

1. تقديم خدمة تعليمية متميزة تكسب الطالب معارف ومهارات تُلبي احتياجات سوق العمل وفق معايير الجودة والاعتماد الأكاديمي.
2. تشجيع الأبحاث العلمية التي تساهم بفاعلية في حل مشكلات المجتمع.
3. تعزيز الشراكة الفاعلة مع الجامعات والمؤسسات المختلفة.
4. تطوير الأطر التنظيمية واللوائح الداخلية للجامعة بما يعزز استقلاليتها ماليا وإداريا.
5. تطوير وإنشاء البرامج الأكاديمية والبنى التحتية للجامعة ومراقبتها في ضوء معايير الاعتماد الأكاديمي.

4. Faculty Vision, Mission, and Objectives:

Vision:

Leadership in the fields of medical education and scientific research locally, regionally and internationally

الريادة في مجالات التعليم الطبي والبحث العلمي محليا وإقليميا ودولياً

Mission

The Faculty of Medical Sciences, Thamar University, seeks to provide integrated education in the fields of medical sciences to graduate a qualified and distinguished people that meets the requirements of the labor market. The graduate will be able to compete locally and regionally. The faculty also seeks to encourage scientific research in vital medical fields related to health, to expand opportunities for access to high-quality health care for the community.

تسعى كلية العلوم الطبية جامعة ذمار إلى تقديم تعليم متكامل في مجالات العلوم الطبية لتخريج كادر مؤهل ومتميز يلبي متطلبات سوق العمل قادر على المنافسة محليا وإقليميا، وتشجيع البحث العلمي في المجالات الطبية الحيوية ذات الصلة بالصحة، لتوسيع فرص الحصول على الرعاية الصحية ذات الجودة العالية للمجتمع.

Faculty Objectives:

The Faculty of Medical Sciences aims to:

1. Graduate distinguished health cadres who meet the needs of the labor market and are capable of self-learning and continuous learning.
2. Provide a stimulating academic environment that keeps pace with scientific developments in health sciences.
3. Encourage scientific research that contributes effectively to solving health services problems in society.
4. Promote implementing community service and research activities that lead to appropriate environmental sustainability by engaging annually in at least one related activity.
5. Establish the principles of comprehensive quality and achieve academic accreditation requirements

تهدف الكلية الى:

1. تخريج كوادر صحية متميزة تُلبي احتياجات سوق العمل قادرة على التعلم الذاتي والمستمر.
2. توفير بيئة أكاديمية محفزة قادرة على مواكبة التطور العلمي في مجالات العلوم الصحية.
3. تشجيع البحث العلمي الذي يساهم بفاعلية في حل مشكلات الخدمات الصحية في المجتمع.
4. تعزيز القيام بأنشطة مجتمعية خدمية وبحثية تؤدي الى الاستدامة البيئية المناسبة من خلال الانخراط سنويا في نشاط واحد على الأقل ذي صلة.
5. ترسيخ مبادئ الجودة الشاملة وتحقيق متطلبات الاعتماد الأكاديمي.

5. Department Vision, Mission, and Objectives :

Vision of the Department :

Leadership in the fields of pharmaceutical education and scientific research locally, regionally, and internationally

الريادة في مجالات التعليم الصيدلاني والبحث العلمي محليا وإقليميا ودولياً.

Mission of the Department:

The Department of Pharmacy seeks to prepare a qualified and ethical pharmacist cadre, capable of providing pharmaceutical care to patients and the community and conducting related research.

يسعى قسم الصيدلة إلى إعداد كادر صيدلاني مؤهل ومتحلي بأخلاقيات المهنة، قادر على تقديم الرعاية الصيدلانية للمرضى والمجتمع والقيام بالبحوث ذات الصلة.

Objectives of the Department:

1. Providing a scientific environment to prepare competent graduates to practice pharmaceutical care committed to the ethics of pharmaceutical work.
2. Developing critical thinking skills and innovation in pharmaceutical sciences to contribute to solving disease problems by adopting case-based education.
3. Encouraging pharmaceutical research that serves the community and encouraging self-learning and continuous learning.

1. توفير بيئة علمية لإعداد خريجين أكفاء لممارسة الرعاية الصيدلانية ملتزمين بأخلاقيات العمل الصيدلاني.
2. تنمية مهارات التفكير الناقد والابتكار في مجال العلوم الصيدلانية للمساهمة في حل المشكلات المرضية باعتماد التعليم القائم على الحالات.
3. تشجيع الأبحاث الصيدلانية التي تخدم المجتمع وتشجيع التعلم الذاتي والمستمر.

6. Pharmacy Program Mission and Objectives:

Program Mission:

Prepare competent pharmacists who can compete in the pharmaceutical labor market and related health fields and are qualified for postgraduate studies by teaching them basic knowledge and modern skills in pharmaceutical sciences.

Program Objectives:

1. Prepare a graduate capable of knowing and understanding the basic principles in pharmaceutical sciences to achieve his mission efficiently.
2. Prepare a graduate trained to select suitable scientific methods and practical means in the preparation, analysis, and evaluation of medicines.
3. Providing the graduate with the necessary skills in selecting and dispensing medications in accordance with pharmaceutical standards and legislations.
4. Providing the graduate with professional ethics and leadership skills to work individually and collectively in different circumstances to serve the society.
5. Providing the graduate with the ability to manage pharmaceutical projects and contribute to making appropriate decisions based on scientific principles.

7. Graduate Attributes:

Upon successful completion of an undergraduate pharmacy education program, the graduates will be able to:

1. Demonstrate knowledge of basic and biomedical sciences and their application in pharmacy.
2. Demonstrate a sound understanding of a substantial body of knowledge in pharmaceutical sciences.
3. Apply current Good Manufacturing Practices (cGMP) criteria in formulating and preparing pharmaceutical /cosmetic products from different sources (including raw materials) and contribute to the distribution and storage system.
4. Utilize analysis methods (qualitative and quantitative) in testing raw materials and pharmaceutical products.
5. Deal safely and effectively with chemicals, natural materials, and pharmaceutical products and participate in optimizing medicine use.
6. Practice and perform responsibilities and authorities ethically, legally, and professionally and respect patients' rights.

7. Educate patients and members of the health care team in the rationale use of medicines based on updated drug information.
8. Apply evidence-based decision-making skills and research in solving problems related to the profession of pharmacy.
9. Demonstrate effective communication, leadership, marketing, and business management skills.
10. Plan, design, conduct, and participate in research to improve healthcare system performance.
11. Apply self-dependence, and life-long and collaborative learning skills in updating their knowledge.

8. Program Intended Learning Outcomes (PILOs):

A. Knowledge and Understanding:

Upon successful completion of the undergraduate Bachelor of Pharmacy Program, the graduates will be able to:

A1 Show understanding of the fundamentals of the basic and biomedical sciences including physics, mathematics, chemistry, structure of human body, normal and abnormal body functions, basis of genomes and different biochemical pathways and their relations to different diseases.

A2 Explain the fundamentals of social and behavioral sciences relevant to pharmacy, ethics of health care and its impact on their relationship with patients and other healthcare professionals.

A3 Explain the physicochemical properties of pharmaceutical products and their relationship to molecular structure and the design of medicinal agents.

A4 Describe the analytical methods, principles, design, development, and validation of pharmaceutical products.

A5 Identify the actions of the medicines within living systems, therapeutic uses of medicines in human, adverse reactions, interactions of medicines, toxicity, and misuse or abuse.

A6 Explain the basis of complementary and alternative medicine.

A7 Identify the types of poisonous substances, sources, mechanisms of toxicity, analysis, clinical pictures, and management.

A8 Describe the bio-pharmaceutics and pharmacokinetics of medicines and their applications.

A9 Define the basis of health policy, pharmacoeconomics, pharmacoepidemiology, marketing, and administration with reference to pharmacy.

A10 Describe the pharmacist's role in health care; dispensing, designing, implementing, monitoring, evaluation, and adjustment of medication therapy plans that are patient-specific and evidence-based to achieve maximum clinical effectiveness.

A11 Identify the properties of different pharmaceutical dosage forms including novel drug delivery systems and biotechnology.

A12 Describe the methods of bio-statistical analysis and pharmaceutical calculations.

B. Cognitive/ Intellectual Skills:

Upon successful completion of the undergraduate Bachelor of Pharmacy Program, the graduates will be able to

B1 Collect, interpret and assess relevant pharmaceutical and biomedical sciences to construct the pharmacophores of the structure and their effect on the stability, pharmacokinetic and pharmacodynamics profile of the drug.

B2 Classify the synthetic and natural drugs according to their mechanism of action, systemic effect, therapeutic uses, contraindication and toxicity.

B3 Design and evaluate different types of safe and effective pharmaceutical dosage forms.

B4 Select appropriate Standard Operating Procedures (SOP) to conduct qualitative and quantitative analysis of pharmaceutical preparations.

B5 Plan a modern system for administration of medical foundations and merge the ethics to business in the drug marketing

B6 Develop and design suitable methods for extraction, isolation, purification, identification, and standardization of active substances from various sources.

B7 Formulate and evaluate patient care plan about the rational use of medications to improve patient safety and efficacy.

B8 Use appropriate research methods to solve practice problems.

B9 Apply pharmaceutical calculation in different pharmaceutical practice.

C. Practical and Professional Skills:

Upon successful completion of the undergraduate Bachelor of Pharmacy Program, the graduates will be able to:

C1 Handle the chemical, biological, and pharmaceutical materials safely, taking into account their physical and chemical properties, including any specific hazards associated with their use, distribution, and storage.

C2 Operate different pharmaceutical equipment and instruments and use emerging technologies in pre-formulation, formulation, packaging, storage and analysis of pharmaceutical products according to Good Laboratory Practice (GLP), Good Storage Practice (GSP) and cGMP guidelines.

C3 Screen drug from different sources, bioassay, and carry out pharmacological and biopharmaceutical experiments

C4 Extract, isolate, purify, identify, standardize, formulate natural products and assure their rational use.

C5 Advise the patients and health care professionals to optimize medicines use.

C6 Employ the relevant ways of preparation and presentation of medicines including extemporaneous, Total Parenteral Nutrition (TPN), and Intravenous (I.V.) admixtures.

C7 Apply administrative and pharmacoeconomic rules in pharmacy and ethically use marketing skills for promoting the pharmaceutical and cosmetic products.

C8 Conduct research studies and utilize the results in different pharmaceutical fields.

D. General and Transferable Skills:

Upon successful completion of the undergraduate Bachelor of Pharmacy Program, the graduates will be able to:

D1 Interact and communicate effectively and ethically with patients, public, and health care professionals.

D2 Apply financial, management, decision-making, time management, organization, sales and marketing skills.

D3 Appraise the importance of team work and the need to work within personal limitations.

D4 Take responsibility for adaptation to change in pharmacy practice.

D5 Retrieve the essential references of evidence-based practice to achieve maximum clinical effectiveness.

9. Alignment of PILOS and program objectives

Program PILOs	Program Objectives					
	PObj1	PObj2	PObj3	PObj4	PObj5	PObj6
A1	√	√	√	√		
A2	√	√				
A3	√	√				
A4	√	√	√	√	√	√
A5		√				
A6	√	√				
A7		√	√			
A8	√		√			
A9			√	√	√	
A10	√		√		√	
A11		√		√		
A12		√	√		√	
B1			√	√		√
B2	√		√			
B3	√		√			
B4	√				√	
B5						

Program PILOs	Program Objectives					
	PObj1	PObj2	PObj3	PObj4	PObj5	PObj6
B6						
B7						
B8	√	√	√			
B9			√			
C1	√			√		
C2		√			√	√
C3		√		√		
C4	√	√				
C5			√	√	√	
C6	√			√		
C7			√		√	
C8		√		√		
D1	√		√	√	√	√
D2			√	√		
D3		√			√	√
D4		√		√		√
D5				√	√	√

10. Teaching Strategy	Description
Lecture	This strategy relies on the instructor presenting the information using data presentations, PowerPoint, or a class board to organize and simplify some ideas, with the student sitting in the listener's position. Students are expected to be asked to return or recite part of the lecture at any time. In this way, the teacher is at the center of the educational process
Cooperative Education	The learner is in a group situation where teaching and learning take place simultaneously. This is required to work in a group to achieve common goals and help students acquire both cognitive aspects and transferable skills.
Dialogue of Discussion	The lecturer manages the oral dialogue through the teaching position in order to arrive at new data or information.
Self-Education	It is a learning pattern where we teach students how to learn what they want to learn on their own and learn the art of owning and mastering self-learning skills to learn in all periods of longevity outside and inside collage to be able to do what is known as continuing education.
Field Training	. This part of the field training is required of students in pharmacies, pharmaceutical laboratories, hospital pharmacies, and pharmaceutical factories

11. Assessment Strategy	Description
Oral final exam	Oral exam will be holed to evaluated all courses
Final written exam	MCQs and objective questions or essay questions
Final practical exam	Final practical exams
Assignments and seminars	Specific topics which give a spits knowledge pharmaceutics
Research	The research project will be drug kinetics drug production and pharmacoagnies

12. Alignment of Program Intended Learning Outcomes (PILOs) to Teaching Strategies and Assessment Methods:

PILOs	Teaching Strategy	Assessment Methods
Knowledge and Understanding A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12	<ul style="list-style-type: none"> Lectures Seminar- Discussion Case Study Self-learning Brainstorming 	<ul style="list-style-type: none"> Quizzes Midterm Exam Objective Structural Clinical Exam (OSCE) Final Written Exam
Intellectual Skills B1, B2, B3, B4, B5, B6, B7, B8, B9	<ul style="list-style-type: none"> Seminars Discussion Problems solving Assignment Writing scientific reviews 	<ul style="list-style-type: none"> Quizzes Midterm Exam scientific reviews reports
Professional & practical skills C1, C2, C3, C4, C5, C6, C7, C8	<ul style="list-style-type: none"> Lab experiments Clinical Training Case scenario 	<ul style="list-style-type: none"> Practical exam Case scenario report Objective Structural Laboratory performance Laboratory report
General & Transferable Skills D1, D2, D3, D4, D5	<ul style="list-style-type: none"> Self-Learning Presentation Research project 	<ul style="list-style-type: none"> Presentations Homework Teamwork Research project evaluation

13. Study System:

Program Duration:

Five Academic Years (Semester based system) divided into ten semesters. The duration of each academic year is 32 weeks

14. Program Structure:

No	Requirements	No. of Courses	Credit Hours	Rational Weight %	
1.	University Requirements	Compulsory	8	8.74%	
		Elective	--		
2.	Faculty Requirements	Compulsory	17	24.04%	
		Elective	--		
3.	Department Requirements	Compulsory	8	8.74%	
		Elective	--		
4.	Program Requirements	Compulsory	38	54.10%	
		Elective	--		
5.	Field Training (if any)	Compulsory	2	2.19%	
6.	Research Project Courses	Compulsory	1	2.19%	
Total:			74	183	100%

15. University Requirements

a. Compulsory Courses

No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L*	T**	P***	Prerequisites, Co-requisites
1.	1/1	PH1121101	Arabic Language 1	لغة عربية 1	2	2			
2.	1/1	PH1121103	English Language 1	لغة انجليزية 1	2	2			
3.	1/1	PH1121102	National culture 1	ثقافة وطنية	2	2			
4.	1/1	PH1121104	Computer Fundamentals	مهارات الحاسوب	2	1		1	
5.	1/2	PH1121105	Arabic Language II	لغة عربية 2	2	2			
6.	1/2	PH1121207	English Language II	لغة انجليزية 2	2	2			
7.	1/2	PH1121208	Islamic Culture	ثقافة إسلامية	2	2			
8.	1/2	PH1121206	National culture II	الصراع العربي الاسرائيلي	2	2			
Total					16	15		1	

* L= lecture ** T=tutorial/seminar, *** P= lab/workshop/training/clinical

15.2 Faculty Requirements

a. Compulsory Courses

No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
1	1/1	PH1121112	Medical Physics	فيزيا طبية	2	2			
2	1/1	PH1121113	General Chemistry	كيمياء عامة	3	2		1	
3	1/1	PH1121111	General Biology	علم الاحياء العام	3	2		1	
4	1/2	PH1121214	Anatomy	تشريح	3	2		1	
5	2/1	PH1122115	Physiology I	علم وظائف الاعضاء 1	3	2		1	
6	2/1	PH1122116	Histology	علم الانسجة	3	2		1	
7	2/2	PH1122217	Physiology II	علم وظائف الاعضاء 2	3	2		1	
8	2/2	PH1122223	Microbiology I	احياء دقيقة 1	3	2		1	
9	2/2	PH1122218	Biochemistry I	كيمياء حيوية 1	3	2		1	
10	3/1	PH1123124	Microbiology II	احياء دقيقة 2	3	2		1	
11	3/1	PH1123119	Biochemistry II	كيمياء حيوية 2	3	2		1	
12	2/1	PH1122181	First aid	إسعافات أولية	2	1		1	
13	3/2	PH1123227	Parasitology	طفيليات	3	2		1	
14	3/1	PH1123125	Pathology	علم الامراض	2	2			
15	3/2	PH1123282	Community Health	صحة مجتمع	2	2			

16	5/1	PH1125184	Research Methodology	طرق البحث	1	1			
17	4/2	PH1124283	Biostatistics	إحصاء حيوي	2	2			
Total					44	32		12	

16. Department requirements

a. Compulsory Courses

No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
1	1/1	PH1121161	Introduction to Pharmacy	مقدمة الصيدلة	2	2			
2	1/2	PH1121221	Psychology	علم النفس	1	1			
3	1/2	PH1121231	Organic Chemistry I	مياء عضوية 1	3	2		1	
4	2/1	PH1122132	Organic Chemistry II	كيمياء عضوية 2	3	2		1	
5	3/1	PH1123126	Instrumental Analysis	التحليل الآلي	3	2		1	
6	5/1	PH1125166	Pharmacy Marketing & Communication Skills	التسويق الدوائي ومهارات الاتصال	2	2			
7	4/1	PH1124164	Pharmacy Management	إدارة صيدلانية	1	1			
8	5/1	PH1123263	Pharmacy Legislations and Ethics	تشريعات وأخلاقيات صيدلانية	1	1			
9	5/2	PH1125285	Research Project	مشروع بحث التخرج	4	0		4	
Total					20	13		7	

15.4 Program Requirement

a. Compulsory Courses

No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
1	1/2	PH1121262	Pharmaceutical Calculations	الحسابات الصيدلانية	2	2			
2	1/2	PH1121241	Pharmaceutical Botany	علم النبات الصيدلاني	3	2		1	
3	2/1	PH1122122	Physical Pharmacy	صيدلة فيزيائية	3	2		1	
4	2/1	PH1122142	Pharmacognosy 1	علم العقاقير 1	3	2		1	
5	2/1	PH1122133	Pharmaceutical Analytical Chemistry 1	كيمياء تحليلية صيدلانية 1	3	2		1	
6	2/2	PH1122235	Pharmaceutical Analytical Chemistry 2	كيمياء تحليلية صيدلانية 2	3	2		1	
7	2/2	PH1122223	Pharmaceutics 1	صيدلانيات 1	3	2		1	
8	2/2	PH1122234	Organic Chemistry 3	كيمياء عضوية 3	3	2		1	
9	2/2	PH1122243	Pharmacognosy 2	علم العقاقير 2	3	2		1	

No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
10	3/1	PH1123172	Pharmaceutics 2	صيدلانيات 2	3	2		1	
11	3/1	PH1123144	Phytochemistry 1	كيمياء العقاقير 1	3	2		1	
12	3/1	PH1123151	Pharmacology 1	علم الأدوية 1	2	2		0	
13	3/2	PH1123273	Pharmaceutics 3	صيدلانيات 3	3	2		1	
14	3/2	PH1123236	Medicinal Chemistry 1	كيمياء دوائية 1	3	2		1	
15	3/2	PH1123245	Phytochemistry 2	كيمياء عقاقير 2	3	2		1	
16	3/2	PH1123252	Pharmacology 2	علم الأدوية 2	3	2		1	
17	4/1	PH1124154	Pharmaceutical Toxicology	علم السموم الصيدلاني	3	2		1	
18	4/1	PH1124174	Biopharmaceutics & Pharmacokinetics 1	صيدلة حيوية وحركية 1	2	2		0	
19	4/1	PH1124137	Medicinal Chemistry 2	كيمياء دوائية 2	3	2		1	
20	4/1	PH1124146	Applied Pharmacognosy	علم العقاقير التطبيقي	2	2		0	
21	4/1	PH1124153	Pharmacology 3	علم الأدوية 3	3	2		1	
22	4/1	PH1124155	Pharmacy Practice 1	التدريب الميداني 1	2	0		2	
23	4/1	PH1124277	Dermatological & Cosmetic Preparations	مستحضرات جلدية وتجميلية	3	2		1	
24	4/2	PH1124265	Pharmacoeconomics & Pharmacovigilance	اقتصاديات الدواء واليقظة الدوائية	2	2		0	
25	4/2	PH1124275	Biopharmaceutics & Pharmacokinetics 2	صيدلة حيوية وحركية 2	3	2		1	
26	4/2	PH1124238	Medicinal Chemistry 3	كيمياء دوائية 3	3	2		1	
27	4/2	PH1124247	Phytotherapy	المعالجة بالعقاقير	2	2		0	
28	4/2	PH1124256	Pharmacology 4	علم الأدوية 4	2	2		0	
29	4/2	PH1124257	Pharmacy Practice 2	التدريب الميداني 2	2	0		2	
30	4/2	PH1124276	Drug Delivery Systems	أنظمة التوصيل الدوائي	2	2		0	
31	5/1	PH1125178	Industrial Pharmacy 1	صيدلة صناعية 1	2	2		0	
32	5/1	PH1125134	Medicinal Chemistry 4	كيمياء دوائية 4	3	2		1	
33	5/1	PH1125158	Clinical Pharmacy 1	صيدلة سريرية 1	3	2		1	
34	5/1	PH1125167	Community Pharmacy	صيدلة مجتمع	2	2		0	
35	5/1	PH1125128	Pharmaceutical Biotechnology	تقانة حيوية دوائية	2	2		0	
36	5/2	PH1125229	Pharmacogenomics	علم الجينات الصيدلاني	1	1		0	
37	5/2	PH1125279	Industrial Pharmacy 2	صيدلة صناعية 2	2	2		0	
38	5/2	PH1125269	Pharmaceutical Quality Control	الرقابة الدوائية	3	2		1	

No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
39	5/2	PH1125259	Clinical Pharmacy 2	صيدلة سريرية 2	3	2		1	
40	5/2	PH1125268	Hospital Pharmacy	صيدلة مستشفيات	2	2		0	
Total					103	75		28	

17. Study Plan:

Level 1

Term 1

No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
1	1/1	PH1121101	Arabic Language I	لغة عربية I	2	2		0	
2	1/1	PH1121102	National Culture I	ثقافة وطنية I	2	2		0	
3	1/1	PH1121103	General English	لغة انجليزية	2	2		0	
4	1/1	PH1121104	Computer Skills	مهارات حاسوب	2	1		1	
5	1/1	PH1121111	General Biology	علم الأحياء العام	3	2		1	
6	1/1	PH1121112	Medical Physics	فيزياء طبية	2	2		0	
7	1/1	PH1121113	General Chemistry	كيمياء عامة	3	2		1	
8	1/1	PH1121161	Introduction to Pharmacy	مقدمة صيدلة	2	2		0	
Total					18	15		3	

Term 2

No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
1	1/2	PH1121205	Arabic Language II	لغة عربية II	2	2		0	
2	1/2	PH1121206	National Culture II	ثقافة وطنية II	2	2		0	
3	1/2	PH1121207	Medical Terminology	مصطلحات طبية	2	2		0	
4	1/2	PH1121208	Islamic Culture	ثقافة إسلامية	2	2		0	
5	1/2	PH1121214	Human Anatomy	تشريح انسان	3	2		1	
6	1/2	PH1121241	Pharmaceutical Botany	علم النبات الصيدلاني	3	2		1	
7	1/2	PH1121231	Pharmaceutical Organic Chemistry I	كيمياء عضوية صيدلانية I	3	2		1	
8	1/2	PH1121262	Pharmaceutical Calculations	الحسابات الصيدلانية	2	2		0	
9	1/2	PH1121221	Psychology	علم النفس	1	1		0	
Total					20	17		3	

Level 2

Term 1

No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
1	2/1	PH1122115	Human Physiology I	علم وظائف أعضاء الإنسان I	3	2		1	--
2	2/1	PH1122116	Histology	علم الأنسجة	3	2		1	
3	2/1	PH1122122	Physical Pharmacy	صيدلة فيزيائية	3	2		1	
4	2/1	PH1122181	First Aids	اسعافات أولية	2	1		1	

5	2/1	PH1122133	Pharmaceutical Analytical Chemistry I	كيمياء تحليلية صيدلانية I	3	2		1	
6	2/1	PH1122142	Pharmacognosy I	علم العقاقير I	3	2		1	
7	2/1	PH1122132	Pharmaceutical Organic Chemistry II	كيمياء عضوية صيدلانية II	3	2		1	
Total					20	13		7	

Term 2									
No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
1	2/2	PH1122217	Human Physiology II	علم وظائف أعضاء الإنسان II	3	2		1	
2	2/2	PH1122223	Pharmaceutical Microbiology I	علم الأحياء الدقيقة الصيدلانية I	3	2		1	
3	2/2	PH1122271	Pharmaceutics I	صيدلانيات I	3	2		1	
4	2/2	PH1122218	Biochemistry I	كيمياء حيوية I	3	2		1	
5	2/2	PH1122235	Pharmaceutical Analytical Chemistry II	كيمياء تحليلية صيدلانية II	3	2		1	
6	2/2	PH1122243	Pharmacognosy II	علم العقاقير II	3	2		1	
7	2/2	PH1122234	Pharmaceutical Organic Chemistry III	كيمياء عضوية صيدلانية III	3	2		1	
Total					21	14		7	

Level 3

Term 1									
No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
1	3/1	PH1123125	Pathology	علم الأمراض	2	2		0	
2	3/1	PH1123124	Pharmaceutical Microbiology II	علم الأحياء الدقيقة الصيدلانية II	3	2		1	
3	3/1	PH1123172	Pharmaceutics II	صيدلانيات II	3	2		1	
4	3/1	PH1123119	Biochemistry II	كيمياء حيوية II	3	2		1	
5	3/1	PH1123126	Instrumental Analysis	التحليل الآلي	3	2		1	
6	3/1	PH1123144	Phytochemistry I	كيمياء العقاقير I	3	2		1	
7	3/1	PH1123151	Pharmacology I	علم الأدوية I	2	2		0	
Total					19	14		5	

Term 2									
No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
1	3/2	PH1123282	Community Health	صحة مجتمع	2	2		0	
2	3/2	PH1123227	Parasitology	علم الطفيليات	3	2		1	
3	3/2	PH1123273	Pharmaceutics III	صيدلانيات III	3	2		1	
4	3/2	PH1123236	Medicinal Chemistry I	كيمياء دوائية I	3	2		1	
5	3/2	PH1123245	Phytochemistry II	كيمياء العقاقير II	3	2		1	
6	3/2	PH1123252	Pharmacology II	علم الأدوية II	3	2		1	
Total					17	12		5	

Level 4

Term 1									
No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
1	4/1	PH1124164	Pharmacy Management	إدارة صيدلانية	1	1		0	
2	4/1	PH1124154	Pharmaceutical Toxicology	علم السموم الصيدلاني	3	2		1	
3	4/1	PH1124174	Biopharmaceutics & Pharmacokinetics I	صيدلة حيوية وحركية I	2	2		0	
4	4/1	PH1124137	Medicinal Chemistry II	كيمياء دوائية 2	3	2		1	
5	4/1	PH1124146	Applied Pharmacognosy	علم العقاقير التطبيقي	2	2		0	
6	4/1	PH1124153	Pharmacology III	علم الأدوية 3	3	2		1	
7	4/1	PH1124277	Dermatological & Cosmetic Preparations	مستحضرات جلدية وتجميلية	3	2		1	
8	4/1	PH1124155	Pharmacy Practice I	التدريب الميداني I	2	0		2	
Total					19	13		6	

Term 2									
No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
1	4/2	PH1124283	Biostatistics	إحصاء حيوي	2	2		0	
2	4/2	PH1124265	Pharmacoeconomics & Pharmacovigilance	اقتصاديات الدواء و اليقظة الدوائية	2	2		0	
3	/2	PH1124275	Biopharmaceutics & Pharmacokinetics II	صيدلة حيوية وحركية II	3	2		1	
4	4/2	PH1124238	Medicinal Chemistry III	كيمياء دوائية III	3	2		1	
5	4/2	PH1124247	Phytotherapy	المعالجة بالعقاقير	2	2		0	
6	4/2	PH1124256	Pharmacology IV	علم الأدوية IV	2	2		0	
7	4/2	PH1124257	Pharmacy Practice II	التدريب الميداني II	2	0		2	
8	4/2	PH1124276	Drug Delivery Systems	أنظمة التوصيل الدوائي	2	2		0	
Total					18	14		4	

Level 5

Term 1									
No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
1	5/1	PH1125184	Research Methodology	طرق البحث العلمي	1	1		0	
2	5/1	PH1125166	Pharmacy Marketing & Communication Skills	التسويق الدوائي ومهارات الاتصال	2	2		0	
3	5/1	PH1125178	Industrial Pharmacy I	صيدلة صناعية I	2	2		0	
4	5/1	PH1125134	Medicinal Chemistry IV	كيمياء دوائية IV	3	2		1	
5	5/1	PH1125158	Clinical Pharmacy I	صيدلة سريرية I	3	2		1	
6	5/1	PH1125167	Community Pharmacy	صيدلة مجتمع	2	2		0	
7	5/1	PH1125128	Pharmaceutical Biotechnology	تقانة حيوية دوائية	2	2		0	
8	5/1	PH1123263	Pharmacy Legislations & Ethics	تشريعات وأخلاقيات الصيدلة	1	1		0	
Total					16	14		2	

Term 2									
No.	Level-Sem.	Course Code	Course Name	اسم المقرر	Cr. Hrs.	L	T	P	Prerequisites, Co-requisites
1	5/2	PH1125229	Pharmacogenomics	علم الجينات الصيدلاني	1	1		0	
2	5/2	PH1125285	Research Project	مشروع بحث التخرج	4	0		4	
3	5/2	PH1125279	Industrial Pharmacy II	صيدلة صناعية II	2	2		0	
4	5/2	PH1125269	Pharmaceutical Quality Control	الرقابة الدوائية	3	2		1	
5	5/2	PH1125259	Clinical Pharmacy II	صيدلة سريرية II	3	2		1	
6	5/2	PH1125268	Hospital Pharmacy	صيدلة مستشفيات	2	2		0	
Total					15	9		6	

18. Admission/Selection/Transfer Requirements:

According to the statute of the Faculty of Medical Sciences at Tamar University for bachelor program of pharmacy, applicants must have Secondary school certificate in a scientific specialty according to the standards of the Ministry of Higher Education and Scientific Research.

19. Graduation Requirements:

Complete 183 credit hours.

A student is considered academically qualified to be awarded Bachelor of Pharmacy in the following conditions:

1. He succeeds (passes) all the academic courses according to the study plan of the program, with a good cumulative average (65%) or above.
2. He successfully completes all the courses with an average of 65% or above for each course.
3. He completes a total of 360 training hours in community pharmacies divided into two periods: 180 hours as a summer training after 3rd level, and 180 hours as a summer training after 4th level.
4. The student must fulfill the requirements for graduation from specialized protocol records and councils.

20. Grading System:

90 to 100	Excellent
80 to <90	Very Good
70 to <80	Good
65 to <70	Pass
< 65	Poor/Fail

21. Facilities Required for Running the Program:

Learning Resources: Bachelor of Pharmacy, Faculty of Medical Sciences places great emphasis on meeting the educational needs and has worked hard to create a unique learning environment that includes classrooms, laboratories with the latest medical technology and equipment, and a well-equipped library including:

1. Adequate classrooms equipped with furniture, presentation equipment, in line with the needs of the program.
2. The necessary and equipped laboratories to cover the practical side.
3. The library, which contains references, periodicals and scientific journals in the specialty
4. Electronic library provided with the Internet.
5. Appropriate and specialized teaching staff.

22. Program Assessment:

Type of the Sample who Assess the program		Instruments used	Sample
1	Senior students	Questionnaire	Meeting
2	Alumni	<ul style="list-style-type: none"> • Questionnaire • Meeting 	Representative Sample
3	Faculty Staff	<ul style="list-style-type: none"> • Questionnaire • Meeting 	Representative Sample
4	Other stakeholders	<ul style="list-style-type: none"> • Questionnaire • Meeting 	Representative Sample
5	External Examiners	Revision and audit report	Report
6	Academic Accreditation Council	interviews + document + reports by quality unite	Frequent report

23. Program Policies:

Based on University Regulations

1.	<p>(Class Attendance): A student should attend not less than 75 % of total hours of the subject; otherwise, he/she will not be able to take the exam and will be considered as exam failure. If the student is absent due to illness, he/she should bring a proof statement from university Clinic. If the absent is more than 25% of a course total contact hours, student will be required to retake the entire course again.</p>
2.	<p>(Tardy) : For late in attending the class, the student will be initially notified. If he repeated lateness in attending class, he/she will be considered as absent.</p>
3.	<p>(Exam Attendance/Punctuality) : A student should attend the exam on time. He/she is permitted to attend an exam half one hour from exam beginning, after that he/she will not be permitted to take the exam and he/she will be considered as absent in exam.</p>
4.	<p>(Assignments & Projects) : Assignments and projects are given as per course specification; the student must submit all the assignments for checking on time, mostly one week after given the assignment.</p>
5.	<p>(Cheating) : For cheating in exam, a student will be considered as fail. In case the cheating is repeated three times during his/her study the student will be disengaged from the faculty.</p>
6.	<p>(Plagiarism) : Plagiarism is the attending of a student the exam of a course instead of another student. If the examination committee proofed a plagiarism of a student, he/she will be disengaged from the faculty. The final disengagement of the student from the faculty should be confirmed from the Student Council Affair of the university or according to the university roles.</p>
7.	<p>(Other policies) :</p> <ul style="list-style-type: none"> - Mobile phones are not allowed to use during a class lecture. It must be closed; otherwise the student will be asked to leave the lecture room. - Mobile phones are not allowed in class during the examination. - Lecture notes and assignments might be given directly to students using soft or hard copy.