AL-YEMENIA UNIVERSITY

BA Program Specification

In

Pharmacy

Program Specification

1. Program Identification and General Information	
Program Title and degree	Bachelor in Pharmacy
Unit responsible to grant degree	Faculty of Assistant Medical Sciences
Unit responsible in program implementation	Department of Pharmacy
Program Type	Independent () shared with one (*) shared with tow() multi()
Department / scientific departments participating in the program	Faculty of Arts
Program Study language	English and Arabic
Beginning of the study year	2015/2016
Program Attendance system	Compulsory Attendance
Program place implementation	University Campus
Program Study system	Semester
Time required to graduate	5 Years (165 Credit Hours)
Admission Qualifications	High School Degree
Admission Appreciation	70% at least
Program Coordinator Name	
last date approval for program specifications	

2. Vision, Mission & Aims of the University

- **Vision:**
  Getting the leadership and the excellence in the fields of higher education and scientific research so as to achieve the persistent development.

- **Mission:**
  Providing distinguished education of high quality through creating inspiring environment for education and intellectual creativity, and to support the scientific research in Yemen so as to fulfill the market needs nationally and regionally

- **Aims:**
  1) To be outstanding in providing the educational programs that equip the students with the knowledge and skills needed by the business market.
  2) Supporting and enhancing the scientific research theoretically and practically in the different fields.
  3) To be committed in applying the quality standards and looking for getting the academic accreditation.
  4) Providing the necessary infrastructure to support the educational process and motivating the students' activities.
  5) Improving the relationships with the universities and scientific research institutions nationally, regionally and internationally.
  6) Serving the society through establishing training and consultant centers.

3. Vision, Mission & Aims of the Faculty

- **Vision:**
  leadership and excellence in the field science of pharmacy and Laboratories locally and regionally

- **Mission:**
  Providing specialized educational programs of high quality in the fields of pharmacy and Laboratories to qualify and improve competitor human cadres to meet the needs of the national and international business market.

- **Aims:**
  1. To be excellence in the provision of educational programs in the areas of pharmacy and Laboratories that earn the student necessary knowledge and skills to meet the needs of the labor market
  2. Encouraging and supporting scientific research in the fields of pharmacy and Laboratories science
  3. Providing educational environment of high quality in accordance with the modern techniques of education.
  4. To serve the community through providing specialized studies, consultations and training
  5. Help Yemen society and reduce the leakage university education to high school graduates

4. Vision, Mission & Aims of the Department

- **Vision:**
  Leadership and excellence in the field of teaching pharmacy science locally and internationally

- **Mission:**
  Offer Bachelor programs in the field of pharmacy science characterized by high quality and keep up with modern technology and continuous program improvement, to be the first department is in Yemen in this field and meets the requirements and needs for the labor market

- **Aims:**
  1) Preparing specialized graduates in the field of pharmacy science, who are well-qualified at the academic and professional levels, in accordance with international quality assurance standards.
  2) To Continue development of the Department academic programs and updating them to cope with recent development of society and its needs.
  3) Developing a partnership with the public and private sectors by conducting studies and providing consultancy in information technology filed.
  4) To provide students with basic concepts and skills of research and develop their initiative and ability to carry out independent research as a basis for further postgraduate study in the field.
  5) serving high school graduates in the Republic of Yemen by Providing them a bachelor's program in teaching pharmacy science and fighting high education leakage

5. Program Vision, Mission & Aims of information technology

- **Vision:**
  The program seeks to achieve the vision of the Pharmacy department and make this department one of the best departments in Yemen

- **Mission:**
  The program seeks to achieve the mission of the department through providing distinctive and useful courses in the field of Pharmacy science which teaches through a professional cadre and producing the desired and efficient outputs that contribute to achieving the objectives of the department, college and university and reaching quality and excellence at the local and Arab levels.

- **Aims:**
  1) Producing efficient outputs with high knowledge and skills that promote and achieve the objectives of the department, college, university and higher education through providing the community with professional and skillful graduates in pharmacy science field
  2) Contribute and create partnerships with local and Arab universities in Pharmacy science field through joint research and local and Arab mutual visits.
  3) Building and developing a stimulating learning environment that enables the student to be creative and distinguished and create the desire to continue his higher education (Master and PhD)
  4) Strong competition and continuous improvement and development Pharmacy science program to be the best in providing Bachelor degree in Yemen and abroad

6. Program References

This program based on a number of similar references and programs in the Yemeni, regional and international universities, which include the following:

Academic Standards:

- National Academic Reference Standards for Health Sciences(NARS) which is based on Accreditation Council for Pharmacy Education (ACPE) http://naqaae.eg/wp-content/uploads/2014/10/NARS-Pharmacy-final-version.pdf

Government Guidelines

- Law No. (13/2005) concerning universities, higher institutes and private colleges and its executive regulations.
- Standards of the Council of Quality and Academic Accreditation.

Similar Programs:

#	University Name	Faculty	Department	Country	Program Accrediting Body	Univ. Website
1	University of Jordan	Faculty of Pharmacy	Department of Pharmacy	Jordan	ACPE	www.pharmacy.ju.edu.jo
2	Sharjah University	Pharmacy College	Department of Pharmacy	Sharjah. UAE	CCAP	www.sharjah.ac.ae
3	Ajman University	Pharmacy College	Department of Pharmacy	Ajman. UAE	CCAP	www.ajman.ac.ae
4	USM	Pharmacy College	Department of Pharmacy	Malaysia	MHE	www.pha.usm.my\pharmacy
5	Kansas University	Pharmacy College	Department of Pharmacy	Kansas. USA	ACPE	www.ku.edu
	University of Connecticut	Pharmacy College	Department of Pharmacy	Connecticut, USA	ACPE	www.pharmacy.uconn.edu

7. Specification of the graduate student

The graduate of the College of Pharmacy from the University has a distinguished profile of the graduates of the faculties of pharmacy in the other universities. This is based on the university's syllabus for the teaching of the Bachelor of Pharmacy, which is characterized by diversity and flexibility, focusing on practical courses and field training, in addition to extracurricular activities and self-confidence. The specifications of a graduate of the College of Pharmacy can be detailed from the university as follows:

- It has a strong and distinctive scientific structure especially in the fields of chemistry and biology.
- Is able to conduct experiments, conduct the necessary pharmaceutical calculations, prepare simple pharmaceutical prescriptions in the pharmacy and prepare these recipes according to the Good Laboratory Practice (GLP)
- He has extensive experience in the field of scientific, practical and research, enabling him to work in the pharmaceutical industries in different companies, factories and laboratories in drug design, discovery and analysis.
- Is capable of establishing and managing private pharmaceutical projects which can be a private pharmacy or drug warehouse or establishment of pharmaceutical factories on a global level.
- Is able to provide medical care to patients, including selection and guidance appropriate to the appropriate dose according to the patient's need and state of health as well as to advise on how to use the drug and expected side effects of the conditions and ethics of the pharmaceutical profession and medical professions in general, which ensures the patient's safety to achieve the optimum benefit of treatment and Ensures continuous and reliable communication between patient and pharmacist.
- (Medication doses, drug reactions, side effects), as well as the ability to detect errors in prescriptions provided, as well as the ability to communicate and interact with patients, especially the community in general, commensurate with the level of the profession He distinguishes him from fellow pharmacists and other university graduates.
- He has sufficient communication and marketing skills to enable him to work as a medical advertising representative in both local and foreign pharmaceutical companies or medical warehouses.
- Is able to interact with the patient and diagnose certain diseases and find the necessary treatment according to the constitutions of medicines and the World Health Organization as provided by the ethics of medical professions as mentioned earlier.
- Is able to raise the level of health and develop the pharmaceutical sector in

7. Specification of the graduate student

terms of pharmaceutical service and create new jobs serving the health sector in general and pharmacist in particular and strengthen the role of pharmacist in the community and supports the mutual trust between the pharmacist and his countrymen to live up to the profession under the current economic and political pressures on pharmacists in Yemen

- He has sufficient scientific knowledge and practical experience in all fields of pharmacy and subjects to enable him to complete his educational career in any high-level specialization he wants in prestigious international universities.
- Is able to work in the governmental sector in all its fields of hospitals, health centers, medical control and medical inspection, as the requirements of the Ministry of Health for these sensitive jobs is very accurate and under the pressure of strong competition.
- Is able to use paper references and electronic resources in addition to the use of technology to conduct research and draw conclusions related to pharmaceutical, medical and pharmaceutical, all the scope of his work.
- Is able to work in educational institutions, which requires a sufficient amount of medical and pharmaceutical knowledge in addition to the distinguished personality, which in turn enables the graduate of pharmacy, whatever the place where he competes to work to prove himself and achieve what is required in the fields of teaching and scientific research, thus achieving the desired excellence that qualifies him for development and advancement.
- The graduate of the Faculty of Pharmacy enjoys a strong leadership, perseverance and ability to integrate and produce under the pressure of work and life, ensuring continuity in success, development and self-expression.

8. Intended Learning Outcomes:

At the end of this program student will:

A- Knowledge and understanding:

- **(A1)** Demonstrate knowledge of essential pharmaceutical sciences.
- **(A2):**Know basic principles of biopharmaceutic & pharmacokinetic , its application in therapeutic usage of medicine and bioequivalence studies.
- **(A3):** Acquire the required knowledge of all basic ,assisting or behavioral sciences.

B- Cognitive skills:

- **(B1)** Join the knowledge and understanding of principles related to pharmaceutical sciences
- **(B2)** Apply the pharmaceutical knowledge in designing safe & effective drug and dealing with novel drug delivery system(NDDS) and ability in applying modern scientific methods for analysis.
- **(B3)** Explain the stages of pharmaceutical industry & apply principles of good manufacturing practice(GMP) and choose the suitable methods of extraction ,manufacturing ,detecting and titration of active ingredient from their different sources.
- **(B4)** Detect the reasons of medical interaction in prescriptions to minimize medical errors and Classify drugs according to function ,chemical structure and detect their structure activity relationship (SAR) in addition to differentiate drug dosage forms.

C- Professional and practical skills:

- **(C1)** Calculate the suitable doses for each age ,sex or medical case & use the medical terms and Choose drugs depending on clear understanding of disease causes and give advice to individuals of community about safe and effective use of drugs (especially OTC drugs) in addition to practice skills of marketing.
- **(C2)** Extract , formulate ,manufacture , dispense drugs and perform quality control tests(Q.C) according to GMP .
- **(C3)** Use efficiently the laboratory instruments and devices required in preparation or analyzing.
- **(C4)** Perform required tests and bioequivalence studies.

D- General and transferal Skills:

- **(D1)** Communicate effectively with health care team and practice the marketing skills of medicines.

- **(D2)** Demonstrate transition from a dependent to an active self-directed learner and take evidence decisions based on regular practice of searching.
- **(D3)** Use effectively relevant and appropriate technologies to enhance learning and communication.

9. Teaching Strategy

It includes description of teaching strategies to achieve learning out comes of the program (lecture, seminar, laboratory, groups, ect. with description of how to use them and average of each of in every course

Teaching Strategy	Description of how it will be used
Lectures	It is the most frequently employed teaching method to convey knowledge and explain theories to students in large groups (50-100) or in sessions, which consist of more than one group gathered in one classroom. Especially used in Educational sciences and general language courses e.g. Arabic Language, Islamic Education, Research Methodology, Comparative Semantics and the theoretical courses of English.
Seminars	These are mainly used with small groups of students (20-30) students in which they find better chances for discussing and negotiating the different concerns of their studies.
Lab experiments	Students doing practices in language labs individually or in small groups. Only used in language practical courses (spoken, listening, phonetics and phonology)
Cooperative learning	Such kind of strategy helps the students to work with each other so as to foster their abilities in problem-solving and creativity. It can be used in the different courses of translation.
Field visits and training	This is a practical kind of course where the students are required to plan and execute some field visits to the companies, corporations or institutions where the process of translation is essential. Such courses to follow this strategy are, for example, Translation Project and field visit and Training Translation.
Dialogue and discussion	This is done by allowing the students to ask questions during the lecture and respond to them by the lecturer or other students for the purpose of establishing and clarify the subject of the lecture strongly and increase the concentration and absorption of the student and the attention and not to enter the boredom.
Training at computer labs	Used mainly in computer and programming courses, in Electronic tools for translation, with average number of students in session(20-30)students : instruction in the use of word-processing,, spreadsheets, email, internet and programming language.
Presentations	Helps the students to be more confident with themselves and make them to show the others what knowledge they have acquired. It can be followed in many types of courses and tasks.
Self-learning	Self-learning is the process by which learners teach themselves using any materials or resources to achieve clear goals without the direct help of the teacher
Training in	Students learn practical in these labs, and acquire skills in field of his study

Biochemical Labs	

10. Assessment Strategy

Regulation and rules of setting for exams (do the program have its own regulations and rules and special conditions or it is according the faculty roles) Describe the way in which assessment is used across the program to achieve its teaching and learning outcomes

Assessment Strategy	Its description(in which course it will be used and in which rate)
Midterm tests	Closed – book examinations are used in all levels and in most of the courses and partially in Laboratory practice; speaking and oral translation. Assessment, 40 % of the total mark are for course work(tests and mid semester exams),and the remaining 60% of mark for final exams for courses.
Final exam	Closed – book examinations are used in all levels and in most of the courses and partially in Laboratory practice; speaking and oral translation. Assessment, 40 % of the total mark are for course work(tests and mid semester exams),and the remaining 60% of mark for final exams for courses.
Oral tests	This type of exams is allotted to test the oral proficiency of the students involved in the program. Such courses as speaking, listening, on-sight translation, consecutive translation need this manner of assessment. Third of the assessment in these courses will be done orally, individually or in groups.
Quizzes	This method of evaluation is used in most of the courses given in the program. The intention here is to make a periodic and non-expected tests to evaluate the students' understanding and achievement in such courses, and hence to make the teachers focus on the main problems and difficulties the students have.
Reports' and projects evaluation.	Coursework such as "Research Papers"; reports; presentations; analyzing texts; these are used in many courses e.g. Discourse Analysis; Comparative Semantics; and Literary Translation; weighted at 10 to 20% of the total mark.
Interviews and evaluating the presentation	The intention behind these kinds of tasks is to follow up the students' performance in the program, daily or weekly. Most of the courses in the program will use these tasks to foster the students to work hardly and constantly.
Oral discussion.	Courses like speaking & listening, reading comprehension, oral translation need pair or group work tasks. These kinds of tasks are to be performed in the class in order to create in the students the sense of cooperation and team work. Such tasks will help in improving the skills mentioned above. At least 50% of the tasks in the above mentioned courses will be done in the class.
Home Work	By Assignment individually or in group including Computer Lab exercises

11. Intended learning outcomes (ILOs) of the Program:

(A) Alignment Program Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:

Program Intended Learning Outcomes	Teaching strategies	Assessment Strategies
A1, A2,A3	Theoretical Lectures Practical Lectures Cooperative learning Dialogue and discussion Training in Biochemical Labs	Midterm tests Final exam Oral tests Quizzes.

(B) Alignment Program Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

Program Intended Learning Outcomes	Teaching strategies	Assessment Strategies
B1 , B2, B3,B4	Theoretical Lectures Practical Lectures Cooperative learning Dialogue and discussion Presentations Brain Storm Self-learning Exercises and problems solving. Training at computer Training in Biochemical Labs	Midterm tests Final exam Oral tests Quizzes Reports' and projects evaluation. Interviews and evaluating the presentation Oral discussion.

(C) Alignment Program Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:		
Program Intended Learning Outcomes	Teaching strategies	Assessment Strategies
C1, C2, **C3**,C4	Training in Biochemical Labs Training at computer Labs Assignments Cooperative learning Dialogue and discussion Presentations Brain Storm Self-learning Exercises and problems Solving	Midterm tests Final exam Oral tests Quizzes Reports' and projects evaluation. Interviews and evaluating the presentation Oral discussion.

(D) Alignment Program Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:		
Program Intended Learning Outcomes	Teaching strategies	Assessment Strategies
D1, D2,D3	Assignment in group and individual Lab experiments Cooper Training at computer labs cooperative learning Field visits and training Presentations	Reports' and projects evaluation. Interviews and evaluating the presentation Oral discussion.

12. Curriculum Map

Write sub Learning Outcomes, attached it with the program specification document, it should be used as a base to write the curriculum map. The curriculum map will be designed in a table containing courses of the program. It should also indicate the relationships or contribution of each course in achieving the program main and sub-learning outcomes.

Program ILOs																
#	Course Code	Courses	Knowledge and Understanding			Intellectual Skills				Professional and Practical Skills				Transferable Skills		
			A1	A2	A3	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3
1	CEU1121	Physical Pharmacy	✓			✓	✓					✓	✓	✓	✓	✓
2	CR1213	Statistics			✓	✓	✓	✓		✓		✓		✓	✓	✓
3	CEU1222	Introduction to Pharmacy history			✓	✓								✓		
4	COG1231	Botany	✓			✓	✓					✓	✓	✓	✓	
5	CEU2123	Pharmaceutics 1	✓			✓	✓	✓	✓		✓		✓	✓	✓	✓
6	ASS2181	Immunology	✓		✓	✓								✓	✓	
7	CEU2124	Pharmaceutical Calculation			✓	✓				✓		✓		✓	✓	
8	MCH2252	Organic Chemistry 2			✓	✓	✓		✓			✓	✓	✓	✓	
9	ACH2272	Analytical Chemistry 2			✓	✓	✓	✓				✓	✓	✓	✓	
10	CEU2225	Pharmaceutics 2	✓			✓	✓		✓		✓	✓	✓	✓	✓	✓
11	ASS2282	Psychology			✓	✓								✓	✓	
12	MCH3253	Organic Chemistry 3			✓	✓	✓		✓			✓	✓	✓	✓	
13	ACH3173	Analytical Chemistry 3			✓	✓	✓					✓	✓	✓	✓	
14	COG3132	Pharmacognosy1	✓			✓	✓	✓			✓	✓	✓	✓	✓	✓
15	CEU3126	Pharmaceutics 3	✓			✓	✓		✓		✓	✓	✓	✓	✓	✓
16	ASS3183	Microbiology1		✓	✓	✓	✓					✓	✓	✓	✓	✓
17	ASS3184	Biochemistry 1		✓	✓	✓	✓					✓	✓	✓	✓	✓
18	MCH3254	Organic Chemistry 4			✓	✓	✓					✓	✓	✓	✓	✓

Program ILOs																
#	Course Code	Courses	Knowledge and Understanding			Intellectual Skills				Professional and Practical Skills				Transferable Skills		
			A1	A2	A3	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3
19	COG3233	Pharmacognosy2	✓			✓	✓	✓			✓	✓	✓	✓	✓	✓
20	CEU3227	Pharmaceutics 4	✓			✓	✓				✓		✓	✓	✓	✓
21	ASS3285	Microbiology2		✓	✓	✓	✓			✓		✓	✓	✓	✓	✓
22	ASS3286	Biochemistry 2		✓	✓	✓	✓			✓		✓	✓	✓	✓	✓
23	COL3241	Pharmacology 1	✓	✓		✓			✓	✓				✓	✓	
24	MCH4155	Medicinal Chemistry 1	✓	✓		✓	✓		✓			✓	✓	✓	✓	✓
25	COG4134	Phytochemistry 1	✓			✓	✓		✓			✓	✓	✓	✓	✓
26	CEU4128	Biopharmaceutics & Pharmacokinetics 1	✓	✓	✓	✓							✓	✓	✓	✓
27	COL4142	Pharmcology2	✓	✓		✓			✓	✓				✓	✓	
28	ASS4187	Pathology		✓	✓	✓								✓	✓	
29	COL4143	Toxicology			✓	✓	✓						✓	✓	✓	
30	MCH4256	Medicinal Chemistry 2	✓	✓		✓	✓		✓			✓	✓	✓	✓	✓
31	COG4235	Photochemistry 2	✓			✓	✓		✓			✓	✓	✓	✓	✓
32	CEU4229	Biopharmaceutics & Pharmacokinetics 2	✓	✓		✓	✓					✓	✓	✓	✓	✓
33	COL4244	Pharmcology3	✓	✓		✓			✓	✓				✓	✓	
34	ASS4288	Parasitology			✓	✓								✓	✓	
35	MCH5157	Medicinal Chemistry 3	✓			✓	✓		✓			✓	✓	✓	✓	✓
36	COG5136	Applied Phrmacognosy	✓			✓	✓	✓			✓	✓	✓	✓	✓	✓
37	MAC5163	Clinical Pharmacy 1	✓			✓			✓	✓				✓	✓	
38	COL5145	Pharmacology 4	✓	✓		✓			✓	✓				✓	✓	
39	MAC5161	Industrial Pharmacy 1	✓			✓	✓	✓			✓	✓	✓	✓	✓	✓
40	MAC5165	Quality control	✓			✓					✓	✓	✓	✓	✓	✓
41	MAC5166	Community Pharmacy	✓			✓				✓				✓	✓	
42	MCH5258	Medicinal Chemistry 4	✓			✓	✓		✓			✓	✓	✓	✓	✓

Program ILOs																
#	Course Code	Courses	Knowledge and Understanding			Intellectual Skills				Professional and Practical Skills				Transferable Skills		
			A1	A2	A3	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3
43	MAC5267	Hospital Pharmacy	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
44	MAC5264	Clinical Pharmacy 2	✓			✓			✓	✓				✓	✓	
45	MCH5259	Drug design	✓			✓			✓	✓				✓	✓	✓
46	MAC5262	Industrial Pharmacy 2	✓			✓	✓	✓			✓	✓	✓	✓	✓	✓
47	ASS5289	Drug Marketing	✓		✓	✓				✓				✓		
48	ER5281	Graduation Project				✓				✓	✓	✓	✓	✓	✓	✓

13. Program Study System

- Time required to complete the program
- Number of hours and percentage of total program hours distributed as a whole

Credit hours	No. Of Credit hours	Percentage of total program hours
University Requirements	12	07%
Faculty Requirements	25	15%
Program Requirements	128	78%
Total Program Credit Hours	165	100%

14. Admission Requirements

Specify the criteria of admission in the program process, such as percentage of secondary school, audition, placement tests, or interview.

- Student must be got Secondary science certificate (at least 70%).
- Original documents and going throw admission process.
- Pass the assessment and testing of the admission or personal interview committee under the applicable regulations.
- Completing university admission application form
- Payment of the tuition fees specified in the Financial Regulations at the beginning of the academic year.
- The applicant has not been dismissed from any other university due disciplinary reasons.
- No admission allowed in two program at the same time.

15. Attendance requirements

Clarifying the rules and regulations which specify conditions of progression from level to other in order to proceed to the next year. rules and regulations to drop out or to transfer to another program in the same faculty.

All roles are taken from the Univ. system for student affairs and we notice on the main points:

- Pass all courses with maximum mark percent 100% and minimum mark percent 50%
- For practical courses student most pass the 2 parts theoretical and practical
  - Pass theoretical part with minimum mark percent 35%
  - Pass practical part with minimum mark percent 35%
  - The total mark for the 2 parts not less than 50%
- Student goes from study level to the next with no more than 3 failed courses

16. Graduation Requirements

Clarifying the rules and regulations which specify conditions of the graduation from the program

- Must pass all courses with total credit hours 165 hours
- Minimal limit of marks to pass in each of the program courses:50 Marks
- Successful Completion of Graduation Project.

17. Study Guidance Plan

First components of the study plan

The study plan in the Department of Translation consists of (165 credit hours) distributed as follows in the table

#	Requirement Type	Credit Hours
1	University Requirement	12
2	Faculty Requirement	25
3	Program Requirement	128
Total of credit hours		165

Second University Requirement

#	Course Code	Course Name	Credit. Hours
1	UR1102	Arabic language101	2
2	UR1104	English language 1	2
3	UR1101	Islamic culture	2
4	UR1201	Arabic Language 2	2
5	UR1205	English Language 2	2
6	UR1206	Computer skills	2
Total of credit hours			12

Third Faculty Requirement

#	Course Code	Course Name	Credit. Hours
1	CR1111	General Biology	3
2	CR1112	General Chemistry	3
3	CR2114	Physiology 1	2
4	CR2115	Anatomy	2
5	MCH2151	Organic Chemistry 1	3
6	ACH2171	Analytical Chemistry 1	3
7	CR2216	Physiology 2	2
8	CR2217	Histology	3
9	CR4118	First Aids	2
10	CR4219	Public Health	2
Total of credit hours			25

Forth Program Requirement

#	Course Code	Course Name	Credit. Hours
1	CEU1121	Physical Pharmacy	3
2	CR1213	Statistics	2
3	CEU1222	Introduction to Pharmacy history	2
4	COG1231	Botany	3
5	CEU2123	Pharmaceutics 1	3
6	ASS2181	Immunology	2
7	CEU2124	Pharmaceutical Calculation	2
8	MCH2252	Organic Chemistry 2	3
9	ACH2272	Analytical Chemistry 2	3
10	CEU2225	Pharmaceutics 2	3
11	ASS2282	Psychology	2
12	MCH3253	Organic Chemistry 3	3
13	ACH3173	Analytical Chemistry 3	3
14	COG3132	Pharmacognosy1	3
15	CEU3126	Pharmaceutics 3	3
16	ASS3183	Microbiology1	3
17	ASS3184	Biochemistry 1	3
18	MCH3254	Organic Chemistry 4	3
19	COG3233	Pharmacognosy2	3
20	CEU3227	Pharmaceutics 4	3
21	ASS3285	Microbiology2	3
22	ASS3286	Biochemistry 2	3
23	COL3241	Pharmacology 1	2
24	MCH4155	Medicinal Chemistry 1	3
25	COG4134	Phytochemistry 1	3
26	CEU4128	Biopharmaceutics & Pharmacokinetics 1	3
27	COL4142	Pharmcology2	2
28	ASS4187	Pathology	2
29	COL4143	Toxicology	3
30	MCH4256	Medicinal Chemistry 2	3
31	COG4235	Photochemistry 2	3
32	CEU4229	Biopharmaceutics & Pharmacokinetics 2	3
33	COL4244	Pharmcology3	2
34	ASS4288	Parasitology	2
35	MCH5157	Medicinal Chemistry 3	3
36	COG5136	Applied Phrmacognosy	3
37	MAC5163	Clinical Pharmacy 1	2
38	COL5145	Pharmacology 4	2
39	MAC5161	Industrial Pharmacy 1	3
40	MAC5165	Quality control	3
41	MAC5166	Community Pharmacy	2
42	MCH5258	Medicinal Chemistry 4	3

43	MAC5267	Hospital Pharmacy	2
44	MAC5264	Clinical Pharmacy 2	2
45	MCH5259	Drug design	2
46	MAC5262	Industrial Pharmacy 2	3
47	ASS5289	Drug Marketing	2
48	ER5281	Graduation Project	4
Total of credit hours			130

Forth The Semesters Plans for the Bachelor of translation Program (138.5 credit hours)

Year 1 (Semester 1)

#	Course Code	Level 1 / Semester 1 Course Name	Credit Hours Theoretical	Seminar	Practical	Training	Total
1	UR1102	**Arabic language101**	2				2
2	UR1104	**English language 1**	2				2
3	CR1111	**General Biology**	2		2		3
4	CR1112	**General Chemistry**	2		2		3
5	CEU1121	**Physical Pharmacy**	2		2		3
6	UR1101	**Islamic culture**	2				2
Total of Credit Hours			15				

Year 1 (Semester 2)

#	Course Code	Level 1 / Semester 2 Course Name	Credit Hours Theoretical	Seminar	Practical	Training	Total
1	UR1201	Arabic Language 2	2				2
2	UR1205	English Language 2	2				2
3	UR1206	Computer skills	2				2
4	CR1213	Statistics	2				2
5	CEU1222	Introduction to Pharmacy history	2				2
6	COG1231	Botany	2		2		3
Total of Credit Hours			13				

Year 2 (Semester 1)

#	Course Code	Level 2 / Semester 1 Course Name	Credit Hours Theoretical	Seminar	Practical	Training	Total
1	CR2114	Physiology 1	2				2
2	CR2115	Anatomy	2				2
3	MCH2151	Organic Chemistry 1	2		2		3
4	ACH2171	Analytical Chemistry1	2		2		3
5	CEU2123	Pharmaceutics 1	2		2		3
6	ASS2181	Immunology	2				2
7	CEU2124	Pharmaceutical Calculation	2				2
Total of Credit Hours			17				

Year 2 (Semester 2)

#	Course Code	Level 2 / Semester 2 Course Name	Credit Hours Theoretical	Seminar	Practical	Training	Total
1	CR2216	Physiology ٢	2				2
2	CR2217	Histology	2		2		3
3	MCH2252	Organic Chemistry 2	2		2		3
4	ACH2272	Analytical Chemistry2	2		2		3
5	CEU2225	Pharmaceutics 2	2		2		3
6	ASS2282	Psychology	2				2
Total of Credit Hours			16				

Year 3 (Semester 1)

#	Course Code	Level 3 / Semester 1 Course Name	Credit Hours				Total
			Theoretical	Seminar	Practical	Training	
1	MCH3253	Organic Chemistry 3	2		2		3
2	ACH3173	Analytical Chemistry 3	2		2		3
3	COG3132	Pharmacognosy1	2		2		3
4	CEU3126	Pharmaceutics 3	2		2		3
5	ASS3183	Microbiology1	2		2		3
6	ASS3184	Biochemistry 1	2		2		3
Total of Credit Hours			18				

Year 3 (Semester 2)

#	Course Code	Level 3 / Semester 2 Course Name	Credit Hours				Total
			Theoretical	Seminar	Practical	Training	
1	MCH3254	Organic Chemistry 4	2		2		3
2	COG3233	Pharmacognosy2	2		2		3
3	CEU3227	Pharmaceutics 4	2		2		3
4	ASS3285	Microbiology2	2		2		3
5	ASS3286	Biochemistry 2	2		2		3
6	COL3241	Pharmacology 1	2				2
Total of Credit Hours			17				

Year 4 (Semester 1)

#	Course Code	Level 4 / Semester 1 Course Name	Credit Hours Theoretical	Seminar	Practical	Training	Total
1	MCH4155	Medicinal Chemistry 1	2		2		3
2	COG4134	Phytochemistry 1	2		2		3
3	CEU4128	Biopharmaceutics & Pharmacokinetics 1	2		2		3
4	COL4142	Pharmcology2	2				2
5	ASS4187	Pathology	2				2
6	COL4143	Toxicology	2		2		3
7	CR4118	First Aids	2				2
Total of Credit Hours			18				

Year 4 (Semester 2)

#	Course Code	Level 4 / Semester 2 Course Name	Credit Hours Theoretical	Seminar	Practical	Training	Total
1	MCH4256	Medicinal Chemistry 2	2		2		3
2	COG4235	Phytochemistry 2	2		2		3
3	CEU4229	Biopharmaceutics & Pharmacokinetics 2	2		2		3
4	COL4244	Pharmcology3	2				2
5	ASS4288	Parasitology	2				2
6	CR4219	Public Health	2				2
Total of Credit Hours			15				

Year 4 (Field Training)

#	Course Code	Level 4 Course Name	Contact Hours Theoretical	Seminar	Practical	Training	Total
1	PH4246	**Field Training level 4**			**250**		

Year 5 (Semester 1)

#	Course Code	Level 5 / Semester 1 Course Name	Credit Hours Theoretical	Seminar	Practical	Training	Total
1	MCH5157	Medicinal Chemistry 3	2		2		3
2	COG5136	Applied Pharmacognosy	2		2		3
3	MAC5163	Clinical Pharmacy 1	2				2
4	COL5145	Pharmacology 4	2				2
5	MAC5161	Industrial Pharmacy 1	2		2		3
6	MAC5165	Quality control	2		2		3
7	MAC5166	Community Pharmacy	2				2
Total of Credit Hours			18				

Year 5 (Semester 2)

#	Course Code	Level 5 / Semester 2 Course Name	Credit Hours Theoretical	Seminar	Practical	Training	Total
1	MCH5258	Medicinal Chemistry 4	2		2		3
2	MAC5267	Hospital Pharmacy	2				2
3	MAC5264	Clinical Pharmacy 2	2				2
4	MCH5259	Drug design	2				2
5	MAC5262	Industrial Pharmacy 2	2		2		3
6	ASS5289	Drug Marketing	2				2
7	ER5281	Graduation Project	2		4		4
Total of Credit Hours			18				

Year 5 (Field Training)

#	Course Code	Level 5 Course Name	Contact Hours Theoretical	Seminar	Practical	Training	Total
1	PH5247	**Field Training level 5**			**250**		

18. Facilities required to implement the program

a. Learning Resources:
- Books
- Journals and periodicals
- Thesis (Master + PhD)
- Articles and research in the web.
- Electronic library.

b. Equipment, tools and educational materials
- Projectors
- Classrooms
- Wi-Fi internet
- Computer labs equipped
- Training Hall

19. Evaluation and improvement of the program

- **Evaluation of the learning outcomes of the program:**

#	Evaluation Tool	Program Intended learning outcomes
1	Graduation Tracking	Knowledge, understanding and general skills
2	Interim and final self-assessment	Knowledge, understanding and mental skills

- **Groups targeted by evaluation**

#	Targeted	Evaluation Tool	Sample
1	Associate Students (Semester II - Semester VIII)	Questionnaire on previous stages	All students
2	Associate Students	Complaints Box	All students
3	Teaching staff	A questionnaire	All teachers
4	Quality Assurance Unit at the University	Self - assessment tools + report	Program Professors

Program Coordinator:

Head of Department:

University's president:

Note:
Appendix 1 contains the curriculum specifications of the program