
Faculty of Medical Science
Department of Pharmacy
Program Specifications
of
PHARMACY BACHELOR

Content

| No | | Page |
|----|---|------|
| 1 | Introduction | 2 |
| 2 | Program identification & general information | 2 |
| 3 | University vision, mission & goals | 3 |
| 4 | Faculty of medical sciences vision, mission & goals | 4 |
| 5 | Department of pharmacy vision , mission & goals | 4 |
| 6 | Program vision, mission & goals | 5 |
| 7 | Program standards & benchmarks | 5 |
| 8 | Program Learning Outcomes (PILOs) | 6 |
| 9 | Graduates attributes | 8 |
| 10 | Teaching & learning strategies | 9 |
| 11 | Assessment strategies | 10 |
| 12 | Alignment of Program Intended Learning Outcomes (PILOs) with Teaching Strategies and Assessment strategies: | 12 |
| 13 | Program Structure | 13 |
| 14 | Study Plan | 16 |
| 15 | Distribution of credit hours | 22 |
| 16 | Admission requirements | 22 |
| 17 | Attendance and Graduation Requirements | 22 |
| 18 | Grading System | 23 |
| 19 | Facilities Required for Running the Program | 23 |
| 20 | Program policies | 24 |
| 22 | Learning Resources | 25 |
| 23 | Program Evaluation | 26 |

1. Introduction

These are the specifications of the academic program “Bachelor of Pharmacy” offered by the department of Pharmacy-Faculty of medical Sciences-Azal university for human Development-Yemen. The program is designed to produce competent graduate pharmacists who are able to provide pharmaceutical care services to the community and contribute in development of pharmaceutical industry and the profession of pharmacy in Yemen, Arab region and the world.

2. Program Identification and General Information:

| | |
|--|--|
| Scientific name of the program: | Bachelor of Pharmacy |
| Total credit hours required to award the degree | 184 Credit hours |
| Number of years needed for completion of the program: | 5 years |
| The body responsible for granting the degree: | Azal University for Human Development-Faculty of medical sciences |
| The body responsible for the program: | Department of Pharmacy-Faculty of Medical sciences |
| Other departments participating in the program: | <ul style="list-style-type: none"> • Medical Laboratory department, Applied med. sciences department • Computer sciences dept., Computer sciences & IT faculty |
| Award granted on completion of the program: | Bachelor of Pharmacy |
| Study system: | <ul style="list-style-type: none"> • Credit hours -Based system • A total of 70 courses distributed over 10 semesters / 5 academic years • Each academic semester is composed of 16 weeks (including the exams period) • Attendance is Obligatory “for NOT LESS THAN 75 % of lectures/practical sections of each course” |
| Study Language of the Program: | English |
| Entry requirements: | Secondary School certificate with minimum grade adopted annually by the Ministry of Higher Education-Yemen |
| Starting year of the program: | 2016 |
| Location of Delivery: | At the university facility (60 th Street-Sana`a) |
| Admission requirements: | As per the regulation of ministry of higher education and scientific research –Yemen. |
| Minimum grade requirements: | <ul style="list-style-type: none"> • 50 % of the mark of each course • Completion of 600 actual hours “Field Training” Completion of graduation research project |
| Date of program development: | 2020 |

3. University vision, Mission and Goals

VISION

Azal university for human developments seeks Leadership locally and regionally in the fields of higher education, scientific research and human development

الرؤية

أن تكون جامعة أزال للتنمية البشرية رائدة محليا وإقليميا في مجال التعليم العالي والبحث العلمي والتنمية البشرية.

MISSION

Offering opportunities for excellent higher education through leader and competent academic programs that contribute in the improvement of educational outcomes, scientific research and human development and capable to provide the local and regional work market with competitive human professionals.

الرسالة

توفير فرص تعليم جامعي متميز من خلال برامج رائدة ذات جودة عالية تسهم في تحسين مخرجات العملية التعليمية والبحث العلمي والتنمية البشرية لرفد سوق العمل المحلي والإقليمي بكوادر بشرية منافسة.

VALUES

- Quality in education
- Environment supports the competent
- Launching from the work market requirements and needs
- Leadership & Ingenuity
- Human building is our concern
- Human development

القيم

- الجودة في التعليم
- بيئة تحتضن الكفاءات
- الانطلاق من متطلبات واحتياجات السوق
- الريادة والإبداع
- بناء الإنسان محور اهتمامنا
- التنمية البشرية

GOALS

1. Providing the students with the knowledge and skills in various academic specializations
2. Contributing in the support of scientific research efforts in different fields
3. Alignment of the education outcomes with the development requirements and the needs of work market
4. Offering stimulant opportunities for the success of teaching and learning process
5. Expanding in partnerships and relationships with local, regional and international universities and scientific research institutions
6. Augmenting the university role in community service by providing training and consultant programs in different development fields.

الأهداف

1. إكساب الطالب المعارف والمهارات في التخصصات الأكاديمية المختلفة.
2. الإسهام في دعم جهود البحث العلمي في المجالات المختلفة
3. ربط المخرجات التعليمية بمتطلبات التنمية واحتياجات سوق العمل.
4. توفير فرص محفزة لإنجاح عملية التعليم والتعلم
5. التوسع في الشراكات وتطوير العلاقة مع الجامعات ومؤسسات البحث العلمي محليا وإقليميا ودوليا.
6. تعزيز دور الجامعة في خدمة المجتمع بتقديم برامج استشارية وتدريبية في مختلف جوانب التنمية.

4. Faculty of Medical sciences vision, Mission and Goals

VISION

Leadership and excellence in quality of the medical education and scientific research

MISSION

The faculty mission is to offer the students a remarkable high education service in medical sciences that concerns with students` acquiring of scientific knowledge and skills to potentiate their capabilities to compete in work market and make them qualified medical staff able to lead and develop in medical work fields and to be creative and effective elements in their society. The faculty also intends to contribute in progress of medical scientific research and to fulfill the community need with medical services

GOALS

1. Raising and developing Medical Sciences Education and outcomes
2. Achieving superiority in academic, instructional and learning aspects of graduate and postgraduate programs
3. Enhancing the effectiveness of its teaching staff to augment student learning
4. Establishing and improving medical sciences learning environment and resources
5. Potentiating the student's ingenuity and their personal, academic and social development
6. Augmenting the relationship with local, regional and international medical academic institutions in the field of scientific research

5. Department of Pharmacy vision, Mission and Goals

VISION: Excellence in pharmacy education, scholarly research, service to society and the profession, and thus improve the healthcare of the rural Appalachian community and is aspired to be the department of choice in Yemen and the region for learners and scholars.

MISSION: To provide a comprehensive and progressive Pharmacy education that produce competent pharmacist who are supplied with knowledge, skills and ethics that make them able to carry out various missions of the profession and consequently improve the health and quality of life of people in Yemen. The program achieves its mission by providing remarkable theoretical and practical courses as well as optimum field training that are presented by high qualified teaching staff.

GOALS

1. To provide excellent education to pharmacy students.
2. To equip pharmacy, graduate students with fundamental knowledge and skills to enhance career opportunities.
3. To develop the teaching capability and skills the teaching staff working at the department
4. To update learning resources applied by the programs offered.
5. To develop the personal, creative and social development of the student character.
6. To conduct applied research and problem-oriented basic research directed for the favor of community with cooperation with academic, industrial and healthcare institutions

6. Program vision, mission and Goals*

Program vision:

Excellence in pharmacy education, scholarly research, service to society and the profession, and improvement of the healthcare of the community and is aspired to be the department of choice in Yemen and the region for learners and scholars.

Program Mission:

To provide a comprehensive and progressive Pharmacy education that produce competent pharmacist who are supplied with knowledge, skills and ethics that make them able to carry out various missions of the profession and consequently improve the health and quality of life of people in Yemen. The program achieves its mission by providing remarkable theoretical and practical courses as well as optimum field training that are presented by high qualified teaching staff.

Goals of the program:

1. To provide excellent education to pharmacy students.
2. To equip pharmacy, graduate students with fundamental knowledge and skills to enhance career opportunities.
3. To develop the teaching capability and skills of the teaching staff working in the program
4. To update learning resources applied by the programs offered.
5. To develop the personal, creative and social development of the student character.
6. To conduct applied research and problem-oriented basic research directed for the favor of community with cooperation with academic, industrial and healthcare institutions

*: The program vision, mission and goals are the same as the department vision, mission and goals because the department, till now, offers one program only.

7. Program Standards & Benchmarks:

Academic Standards:

- Regulations provided by the council for accreditation and quality assurance (CAQA) – Ministry of Higher education & scientific research, Yemen.
- National academic reference standards (NARS) of pharmacy, 2018 adopted by the council for accreditation & quality assurance (CAQA) – Ministry of Higher education & scientific research, Yemen.
- Unified regulations for student affairs, ministry of higher education and scientific research.

Program Benchmarks:

Similar academic program offered by the following universities:

1. **Najran University, Saudi Arabia**

https://pharmacy.nu.edu.sa/documents/46855/123445697/Program+Specification_1442.pdf/e1a31dc7-b824-55bf-62a0-06c8cbfd5a65?t=1634745891229

2. **Sharjah University, United Arab Emirates**

<https://www.sharjah.ac.ae/en/academics/Colleges/Pharmacy/Pages/Bachelor-of-Pharmacy.aspx>

3. **Arab American University, Palestine**

<https://www.aaup.edu/ar/Academics/Undergraduate-Studies/Faculty-Pharmacy/Pharmacy-Department/Pharmacy/Curriculum>

4. **Middle East University, Jordan**

<https://meu.edu.jo//wp-content/uploads/faculties/pharmacy/BSc%20in%20Pharmacy%20Program%20Manual%202020-21.pdf>

5. **Al-Zaytoonah university of Jordan, Jordan Themes**

https://www.zuj.edu.jo/wp-content/uploads/2018/06/Course_Plan_june_2018_ar.pdf

6. **Cairo university, Egypt**

<https://www.pharma.cu.edu.eg/english/AcademicPrograms/UgPrograms/Regular/UgCourses.aspx>

8. Program Learning Outcomes:

A. Knowledge and Understanding:

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

- A1.** Show understanding of fundamentals of biomedical sciences, physics, mathematics and chemistry and organization of human body.
- A2.** Explain the fundamental of social and behavioral sciences.
- A3.** Explain physicochemical properties of materials and products
- A4.** Describe analytical methods, principles, design and development techniques
- A5.** Identify actions of medicines on human body.
- A6.** Explain the basis of complementary and alternative medicines
- A7.** Identify types of poisons and mechanisms and actions of poisoning
- A8.** Describe Biopharmaceutics and pharmacokinetics of medicines
- A9.** Define the basis of health policy, Pharmacoeconomics, pharmacoepidemiology , pharmaceutical marketing and administration.
- A10.** Describe the pharmacists role in different pharmacy practices.
- A11.** Identify the properties of dosage forms and novel drug delivery systems.
- A12.** Describe the methods of biostatistics and pharmaceutical calculations

B. Cognitive/ Intellectual Skills:

Upon successful completion of an undergraduate Networks and Information Security program, graduates should be able to:

- B1.** Collect interpret and assess information and data relevant to pharmacy practice.
- B2.** Classify drugs, approaches and other information relevant to pharmacy based on scientific classification system.
- B3.** Design an evaluate different types of safe and effective drugs, pharmaceutical dosage forms and cosmetic preparations.

- B4.** Select appropriate standard operation procedures to conduct qualitative and quantitative analysis.
- B5.** Plan a modern system for administration of foundations and merge ethics to business in drug marketing.
- B6.** Develop and design suitable methods for extraction of active medicinal agents from various sources.
- B7.** Formulate and evaluate patient care plan about rational drug use of medications.
- B8.** Use appropriate research methods including experimental, observational and electronic to collect data and solve problems.
- B9.** Apply mathematical equations to calculate data relevant to pharmacy practices.

C. Practical and Professional Skills:

Upon successful completion of an undergraduate Networks and Information Security program, graduates should be able to:

- C1.** Handle safely the chemicals, biological samples and pharmaceutical ingredients and products.
- C2.** Operate different instruments and use emerge technologies for preformulation, formulation and analysis of materials according to standard guidelines.
- C3.** Screen for drugs from different sources and carry out pharmacy relevant experiments successfully.
- C4.** Advice patients and healthcare professionals to optimize medicines use.
- C5.** Employ the relevant ways to produce extemporaneous preparations including TPN and IV admixtures.
- C6.** Apply administrative and Pharmacoeconomics rules in pharmacy and ethically use marketing skills for drug promotion.
- C7.** Conduct research and utilize the results in different pharmaceutical fields.

D. General and Transferable Skills:

Upon successful completion of an undergraduate Networks and Information Security program, graduates should be able to:

- D1.** Interact and communicate effectively and behave in disciplines with colleagues, patients and healthcare professionals effectively in team-activities.
- D2.** Develop and demonstrate skills of time managements, self-learning and decision making.
- D3.** Participate collaboratively in team work with colleagues and healthcare professionals.
- D4.** Take the responsibility for adaption to change needs in pharmacy practice.
- D5.** Retrieve essential references of evidence-based to achieve maximal clinical effectiveness

9. Graduates Attributes:

Upon successful completion of this program, the graduates will be able to:

1. Demonstrate knowledge of basic and biomedical sciences and their applications 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 medicines uses.
6. Practice and perform responsibilities and authorities ethically, legally, professionally and respect patient`s rights.
7. Educate patients and members of health care team in rational use of medicines based on updated drug information.
8. Apply evidence-based decision making skills and search in solving problems related to pharmacy profession.
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 , life-long and collaborative learning skills in updating their knowledge.

10. Teaching and Learning Strategies

- **Active Lecture**
- **Feed-back Learning (FBL)** including (Problem-based learning (PBL), Seminars , Journal clubs and workshops, Computer and web-based learning (WBL), Use of communication and information technology (CIT) and Self-Directed Learning (SDL))
- **Group Project**
- **Lab. practice (Practical classes)**
- **Field Training**

| Strategy | Description |
|---------------------------------|--|
| Active Lecture | This is the most frequently employed teaching method in the program. It is to convey knowledge and explain theories to students in large groups (50-200).The efficiency of lecturing should be enhanced by using techniques such as Brainstorming : It depends on stimulation of the student`s brain through a group of questions &/or Concepts mapping : which depends on sequencing of thoughts in the form of maps with horizontal or vertical relations and other techniques & by using learning aids such as Data show projector, Intelligent board and models. |
| Feed-back learning (FBL) | Feed-back learning : students are individually asked to do certain assignments such as summarizing, internet search, make charts or solve mathematical problems related to the courses topics. The teacher will provide them feed-back correction & evaluation. Common examples of FBL strategy is <ul style="list-style-type: none"> • Problem-Based Learning: The PBL strategy involves working in small groups of students. The group are assigned to solve a problem of a real-world issue or a mathematical problem or a clinical case study and asks them to come up with a well-constructed answer. • Seminars: These are mainly used with small groups of students (20-30) students in which they find better chances for discussing and participating in the teaching process. |

| | |
|--|--|
| | <ul style="list-style-type: none"> • Computer and web-based learning (WBL): The student (individually) is assigned to do a search on a topic using computer CD and/or web search form a reliable web sites. • Use of communication & information technology (CIT): This strategy involves, during class, the use of computer, scientific mobile applications (e.g. Medscape, Lexi-comb, etc. • Journal clubs & workshops: In this strategy, a group of students are assigned to critically evaluate recent articles in the literature and report their work to the teacher to be discussed in a workshop with other students. • Self-directed learning (SDL : In this strategy, the student takes control of their own learning, with or without the help of others. |
| Group Project | Students work on a topic or a project in groups of 2 to 3 students. Important for learning by doing ,using the results in practical manner &for promoting team work skills |
| Lab. practice (Practical classes) | students doing experiments in labs individually or in small groups |
| Field-Training | The students are assigned to perform certain tasks in the real-life field in hospitals, community pharmacies and drug plants during summer. |

11. Assessment strategies

- **Theoretical part assessment:** Written exam (e.g. MCQs and short essay) and Quizzes , Assignment (e.g. Short essays, Reports, homework, group project , seminar assessment, Work samples such as logbooks and portfolios) assessments.
- **Practical part assessment** (including: Lab. term work (**attitude + Lab. accomplishments** (Summative practical assessment) and **final practical exam**)
- **Field Training assessment** (Multi-source assessments, Work samples such as logbooks and portfolios)
- **Graduation Project assessment** (Multisource assessment)

| | Assessment strategy | Description |
|-----------------------------|---------------------|--|
| Theoretical part assessment | Written Exams | The written exams are employed in mid-exam and final exams. It should be comprehensive for the knowledge and intellectual skills provided by the course. Models of the exam should be variant and include at least: Short essay: A short essay is, generally, a piece of writing on a certain topic related to course. MCQ is a model written assessment where the question involves selection of one appropriate answer among other answers. It can be a method employed in mid, final exams. or Quizzes |
| | Quizzes | A short spoken or written test that is often taken without preparation; It generally concerns with a particular thought, idea or problem. |
| | Assignments | Assignments refer to the allocation of a task or set of tasks that are marked and graded by the teacher. Examples of tasks include, written Reports, homework, group project, seminar assessment, work samples such as logbooks and portfolios, etc. |

| | | | |
|--------------------------------------|-----------------------------|--|---|
| Practical part assessment | Lab. term work | Attitude | The Lab. teacher measures cooperation, friendliness, activity, care and other good behaviors during the lab. sections |
| | | Lab. accomplishments (Summative practical assessments) | The Lab. teacher measures the student`s ability (with the aid of the teacher) to perform practical tasks every Lab. section and provides the result as summative mark at the end of the term. . |
| | Final Practical Exam | | The Lab. teacher measures the student`s ability (with no aid of the teacher) to perform practical tasks at the end of the semester. . |
| Field- Training Assessment | | | Multi-source assessments such as Work samples e.g. logbooks and portfolios are employed at training sessions. More details are present in section 11.2 |
| Graduation Project Assessment | | | It is also multi-sources assessment and more details are present in section 11.3 |

Assessment of students in courses that involve only theoretical parts

| Assessment method | Mark | Weight % |
|-------------------|------------|--------------|
| Assignments | 10 | 10 % |
| Quizzes | 10 | 10 % |
| Mid-exam | 20 | 20 % |
| Final Exam | 60 | 60 % |
| Total | 100 | 100 % |

Assessment of students in courses involve both theoretical sections & practical section

| 1- Theoretical part (70 marks) | | |
|--------------------------------|-----------|-------------|
| Assessment method | Mark | Weight % |
| Quizzes | 5 | 5 % |
| Assignments | 5 | 5 % |
| Mid-exam (Written exam) | 10 | 10 % |
| Final Exam (Written exam) | 50 | 50 % |
| Total | 70 | 70 % |
| 2- Practical part (30 marks) | | |
| Assessment method | Mark | Weight % |
| Attitude | 5 | 5 % |
| Lab. accomplishments | 5 | 5 % |
| Final practical Exam | 20 | 20 % |
| Total | 30 | 30 % |

11.1. Field-training Assessment *

| Item | Weight % |
|--|------------|
| Attendance | 20 % |
| Attitude (assessed by the training supervisor and approved by a signed report by the facility responsible) | 20 % |
| Assignment (Seminar) | 10 % |
| Reporting (log book) | 20 % |
| Oral exam by a committee of teaching staff | 30 % |
| Total | 100 |

*: Field training for 600 actual hours is a compulsory requirement for graduation.

To pass the training, the student must get 80 % of the training weight %

11.2. Graduation Project Assessment:

Each project will be assessed by a committee of three members as follows

| Item | Marks Distribution |
|--|--------------------|
| Research project supervisor | 70 % |
| Internal examiner: a member of the department teaching staff. | 15 % |
| External examiner: a qualified external examiner (either from other departments of the faculty or from another university) | 15 % |
| Total | 100 % |

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

| PILOs | Teaching Strategy | Assessment strategy |
|---|---|---|
| Knowledge and Understanding A1-A12 | <ul style="list-style-type: none"> Active Lectures Feed-back Learning (FBL) Group Project | Written exam, Quizzes, Assignments |
| Intellectual Skills B1-B9 | <ul style="list-style-type: none"> Active Lectures Feed-back Learning (FBL) Lab. practice Group Project | Written exam, Quizzes and Assignments, Lab. term work (Lab. accomplishment and Final practical exam), Field Training assessment and Graduation Project assessment |

| | | |
|--|--|--|
| Professional & practical skills C1-C7 | <ul style="list-style-type: none"> • Lab. practice • Feed-back Learning (FBL) • Field training • Group project | Lab. term work (Lab. accomplishment and Final practical exam), Field Training assessment and Graduation Project assessment |
| General & Transferable Skills D1-D5 | <ul style="list-style-type: none"> • Lab. practice • Feed-back Learning (FBL) • Group project | <ul style="list-style-type: none"> • Lab. term work (attitude) • Assignments • Field-training assessment • Graduation Project assessment |

13. Program Structure:

| No | Requirements | No. of Courses | Credit Hours | Rational Weight % | |
|---------------|--------------------------------|---|--------------|-------------------|----------|
| 1 | University Requirements | Compulsory | 6 | 13 | 7.027 % |
| | | Elective | - | - | |
| 2 | Faculty Requirements | Compulsory | 17 | 45 | 24.864 % |
| | | Elective | - | - | |
| 3 | Program Requirements | Compulsory | 47 | 126 | 68.108 % |
| | | Elective | - | - | - |
| 4 | Field training (Summer Course) | <i>Field-training for 600 actual hours is a compulsory requirement for graduation</i> | | | |
| Total: | | 70 | 184 | 100% | |

13.1. University Requirements (13 hrs)

| Compulsory Courses (6 courses) | | | | | | | | |
|---------------------------------|-------------|---------------------|---|---|---|----------|------------------------------|-----------------|
| No | Course Code | Course Name | L | T | P | Cr. Hrs. | Prerequisites, Co-requisites | Level/ Semester |
| 1 | AZA111 | Arabic language I | 2 | - | - | 2 | - | 1/1 |
| 2 | AZA112 | Computer skills | 2 | - | 1 | 3 | - | 1/1 |
| 3 | AZA116 | English language I | 2 | - | - | 2 | - | 1/1 |
| 4 | AZA121 | Arabic language II | 2 | - | - | 2 | Pre: AZA111 | 1/2 |
| 5 | AZA122 | English language II | 2 | - | - | 2 | Pre: AZA116 | 1/2 |
| 6 | AZA123 | Islamic culture | 2 | - | - | 2 | - | 1/2 |

13.2. Faculty Requirements (45 hrs)

| Compulsory Courses (17 courses) | | | | | | | | |
|---------------------------------|-------------|----------------------|---|---|---|----------|------------------------------|----------------|
| No | Course Code | Course Name | L | T | P | Cr. Hrs. | Prerequisites, Co-requisites | Level/Semester |
| 1. | FMS113 | Medical Physics | 2 | - | 1 | 3 | - | 1/1 |
| 2. | FMS114 | Biology | 2 | - | 1 | 3 | - | 1/1 |
| 3. | FMS115 | General Chemistry | 2 | - | 1 | 3 | - | 1/1 |
| 4. | FMS118 | Medical terminology | 3 | - | - | 3 | Co: FMS118 | 1/1 |
| 5. | FMS124 | Psychology | 2 | - | 1 | 3 | - | 1/2 |
| 6. | FMS125 | First aid | 2 | - | 1 | 3 | - | 1/2 |
| 7. | FMS211 | Medical Ethics | 2 | - | - | 2 | - | 2/1 |
| 8. | FMS212 | Anatomy | 2 | - | 1 | 3 | Co: FMS215 | 2/1 |
| 9. | FMS213 | Biochemistry I | 2 | - | 1 | 3 | Co: PHR217 | 2/1 |
| 10. | FMS215 | Physiology I | 2 | - | 1 | 3 | Co: FMS212 | 2/1 |
| 11. | FMS221 | Biochemistry II | 2 | - | 1 | 3 | Pre: FMS213, Co: PHR225 | 2/2 |
| 12. | FMS223 | Physiology II | 2 | - | 1 | 3 | Pre: FMS215 | 2/2 |
| 13. | FMS224 | Histology | 2 | - | - | 2 | Pre: FMS212 | 2/2 |
| 14. | FMS427 | Medical statistics | 2 | - | - | 2 | - | 4/2 |
| 15. | FMS226 | Pathology | 2 | - | 1 | 3 | Pre: PHR324 | 2/1 |
| 16. | FMS511 | Research methodology | 2 | - | - | 2 | - | 5/1 |
| 17. | FMS525 | Graduation project | - | - | 2 | 2 | - | 5/2 |

13.3. Program Major (126 hrs)

| Compulsory Courses (44 courses) | | | | | | | | |
|---------------------------------|-------------|---|---|---|---|----------|------------------------------|----------------|
| No | Course Code | Course Name | L | T | P | Cr. Hrs. | Prerequisites, Co-requisites | Level/Semester |
| 1. | PHR117 | Introduction to Pharmacy | 2 | - | - | 2 | - | 1/1 |
| 2. | PHR126 | Pharmaceutical calculations | 2 | - | - | 2 | Co: PHR127 | 1/2 |
| 3. | PHR127 | Mathematics | 2 | - | - | 2 | Co: PHR126 | 1/2 |
| 4. | PHR214 | Pharmaceutical analytical chemistry I | 2 | - | 1 | 3 | Pre: PHR126 | 2/1 |
| 5. | PHR216 | Physical Pharmacy | 2 | - | 1 | 3 | Co: PHR214 | 2/1 |
| 6. | PHR217 | Pharmaceutical Organic chemistry I | 2 | - | 1 | 3 | Pre: PHR212 | 2/1 |
| 7. | PHR222 | Pharmaceutical analytical chemistry II | 2 | - | 1 | 3 | Pre: PHR214 | 2/2 |
| 8. | PHR225 | Pharmaceutical Organic chemistry II | 2 | - | 1 | 3 | Pre: PHR217 | 2/2 |
| 9. | PHR227 | Pharmaceutics I | 2 | - | 1 | 3 | - | 2/2 |
| 10. | PHR311 | General Pharmacognosy I | 2 | - | 1 | 3 | Pre: PHR226 | 3/1 |
| 11. | PHR312 | Pharmaceutical Microbiology I | 2 | - | 1 | 3 | Pre: FMS227 | 3/1 |
| 12. | PHR313 | Pharmacology & Therapeutics I | 3 | - | - | 3 | Co: PHR314 | 3/1 |
| 13. | PHR314 | Medicinal chemistry I | 2 | - | 1 | 3 | Co: PHR313 | 3/1 |
| 14. | PHR315 | Pharmaceutical Organic chemistry III | 2 | - | 1 | 3 | Pre: PHR225 | 3/1 |
| 15. | PHR316 | Pharmaceutical analytical chemistry III | 2 | - | 1 | 3 | Pre: PHR222 | 3/1 |
| 16. | PHR317 | Pharmaceutics II | 2 | - | 1 | 3 | Pre: PHR225 | 3/1 |
| 17. | PHR321 | Pharmaceutical Microbiology II | 2 | - | 1 | 3 | Pre: PHR312 | 3/2 |
| 18. | PHR322 | General Pharmacognosy II | 2 | - | 1 | 3 | Pre: PHR311 | 3/2 |

| | | | | | | | | |
|-----|--------|--|---|---|---|---|-------------------------|-----|
| 19. | PHR323 | Medicinal chemistry II | 2 | - | 1 | 3 | Co: PHR325 | 3/2 |
| 20. | PHR324 | Clinical immunology | 2 | - | 1 | 3 | Pre: PHR313 | 3/2 |
| 21. | PHR325 | Pharmacology & Therapeutics II | 2 | - | 1 | 3 | Co: PHR323 | 3/2 |
| 22. | PHR326 | Pharmaceutical Biotechnology | 2 | - | - | 2 | | 3/2 |
| 23. | PHR327 | Pharmaceutics III | 2 | - | 1 | 3 | Pre: PHR317 | 3/2 |
| 24. | PHR411 | Biopharmaceutics & Pharmacokinetics I | 2 | - | - | 2 | Pre: PHR325 | 4/1 |
| 25. | PHR412 | Pharmacology & Therapeutics III | 3 | - | - | 3 | Co: PHR413 | 4/1 |
| 26. | PHR413 | Medicinal chemistry III | 2 | - | 1 | 3 | Co: PHR5412 | 4/1 |
| 27. | PHR414 | Phytochemistry I | 2 | - | 1 | 3 | Pre: PHR322 | 4/1 |
| 28. | PHR415 | Pharmacoeconomics | 2 | - | - | 2 | | |
| 29. | PHR416 | Community Pharmacy | 2 | - | 1 | 3 | Co: PHR412 | 4/1 |
| 30. | PHR417 | Cosmetics | 2 | - | 1 | 3 | | |
| 31. | PHR418 | Pharmaceutics IV | 2 | - | 1 | 3 | Pre: PHR327 | 4/1 |
| 32. | PHR421 | Pharmacology & Therapeutics IV | 2 | - | 1 | 3 | Co: PHR422 | 4/2 |
| 33. | PHR422 | Medicinal chemistry IV | 2 | - | 1 | 3 | Co: PHR421 | 4/2 |
| 34. | PHR423 | Biopharmaceutics & Pharmacokinetics II | 2 | - | - | 2 | Pre: PHR411 | 4/2 |
| 35. | PHR424 | Phytochemistry II | 2 | - | 1 | 3 | Pre: PHR414 | 4/2 |
| 36. | PHR425 | Toxicology | 2 | - | 1 | 3 | Pre: PHR417, Co: PHR421 | 4/2 |
| 37. | PHR426 | Hospital pharmacy | 2 | - | - | 2 | Co: PHR423 | 4/2 |
| 38. | PHR427 | Field Pharmacy Training 1(300 Hours) | - | - | - | - | | |
| 39. | PHR512 | Clinical pharmacy I | 2 | - | 1 | 3 | Pre: PHR426 | 5/1 |
| 40. | PHR513 | Industrial pharmacy | 2 | - | - | 2 | Co: PHR514 | 5/1 |
| 41. | PHR514 | quality control | 2 | - | 1 | 3 | Co: PHR513 | 5/1 |
| 42. | PHR515 | Nuclear Pharmacy | 2 | - | 1 | 3 | Pre: PHR421 | 5/1 |
| 43. | PHR521 | Pharmaceutical marketing | 2 | - | - | 2 | Co: PHR525 | 5/2 |
| 44. | PHR522 | Clinical pharmacy II | 2 | - | 1 | 3 | Pre: PHR512 | 5/2 |
| 45. | PHR523 | Drug discovery & Development | 2 | - | - | 2 | Pre: FMS511 | 5/2 |
| 46. | PHR524 | Applied Pharmacognosy II | 2 | - | 1 | 3 | Co: PHR522 | 5/2 |
| 47. | PHR525 | Field Pharmacy Training 2(300 Hours) | - | - | - | - | | |

13.4. Elective Courses

| Elective Course | | | | | | | | |
|-----------------|-------------|-------------|---|---|---|----------|------------------------------|-----------------|
| No | Course Code | Course Name | L | T | P | Cr. Hrs. | Prerequisites, Co-requisites | Level/ Semester |
| 1 | - | Nil | - | - | - | - | - | - |
| 2 | - | Nil | - | - | - | - | - | - |
| 3 | - | Nil | - | - | - | - | - | - |

13.5. Training Plan in the program

The plan is attached with this document

Study Plan:

Level 1

| Term 1 | | | | | | | | |
|--------|-------------|-----------------------------|----------------------|--------------|---|---|-------|------------------------------|
| No. | Course Code | Course Name | | Credit hours | | | | Prerequisites, Co-requisites |
| | | | | L | T | P | Total | |
| 1 | AZA111 | Arabic language I | اللغة العربية 1 | 2 | - | - | 2 | - |
| 2 | AZA112 | Computer skills | مهارات حاسوب | 2 | - | 1 | 3 | - |
| 3 | FMS113 | Medical Physics | الفيزياء الطبية | 2 | - | 1 | 3 | - |
| 4 | FMS114 | Biology | الاحياء | 2 | - | 1 | 3 | - |
| 5 | FMS115 | General Chemistry | الكيمياء العامة | 2 | - | 1 | 3 | - |
| 6 | AZA116 | English language I | اللغة الانجليزية 1 | 2 | - | - | 2 | Co: FMS118 |
| 7 | PHR117 | Introduction to Pharmacy | مدخل الى علم الصيدلة | 2 | - | - | 2 | - |
| 8 | FMS118 | Medical terminology | المصطلحات الطبية | 3 | - | - | 3 | Co: FMS118 |
| Total | | | | 17 | 0 | 4 | 21 | |
| Term 2 | | | | | | | | |
| No. | Course Code | Course Name | | Credit hours | | | | Prerequisites, Co-requisites |
| | | | | L | T | P | Total | |
| 1 | AZA121 | Arabic language II | اللغة العربية 2 | 2 | - | - | 2 | Pre: AZA111 |
| 2 | AZA122 | English language II | اللغة الانجليزية 2 | 2 | - | - | 2 | Pre: AZA112 |
| 3 | AZA123 | Islamic culture | الثقافة الاسلامية | 2 | - | - | 2 | - |
| 4 | FMS124 | Psychology | علم النفس | 2 | - | - | 2 | - |
| 5 | FMS125 | First aid | الاسعافات الاولية | 2 | - | 1 | 3 | - |
| 6 | PHR126 | Pharmaceutical Calculations | الحسابات الصيدلانية | 2 | - | - | 2 | Co: PHR127 |
| 7 | PHR127 | Mathematics | الرياضيات | 2 | - | - | 2 | Co: PHR126 |
| Total | | | | 14 | 0 | 1 | 15 | |

Level 2

| Term 1 | | | | | | | | |
|--------|-------------|--|---------------------------------|--------------|---|---|-------|------------------------------|
| No. | Course Code | Course Name | | Credit hours | | | | Prerequisites, Co-requisites |
| | | | | L | T | P | Total | |
| 1. | FMS211 | Medical Ethics | الاخلاقيات الطبية | 2 | - | - | 2 | - |
| 2. | FMS212 | Anatomy | علم التشريح | 2 | - | 1 | 3 | Co: FMS215 |
| 3. | FMS213 | Biochemistry I | الكيمياء الحيوية 1 | 2 | - | 1 | 3 | Co: PHR217 |
| 4. | PHR214 | Pharmaceutical analytical chemistry I | الكيمياء التحليلية الصيدلانية 1 | 2 | - | 1 | 3 | Pre: PHR126 |
| 5. | FMS215 | Physiology I | علم وظائف الاعضاء 1 | 2 | - | 1 | 3 | Co: FMS212 |
| 6. | PHR216 | Physical Pharmacy | الصيدلة الفيزيائية | 2 | - | 1 | 3 | Co: PHR214 |
| 7. | PHR217 | Pharmaceutical Organic chemistry I | الكيمياء العضوية الصيدلانية 1 | 2 | - | 1 | 3 | Co: FMS213 |
| Total | | | | 14 | - | 6 | 20 | |
| Term 2 | | | | | | | | |
| No. | Course Code | Course Name | | Credit hours | | | | Prerequisites, Co-requisites |
| | | | | L | T | P | Total | |
| 1 | FMS221 | Biochemistry II | الكيمياء الحيوية 2 | 2 | - | 1 | 3 | Pre: FMS213, Co: PHR225 |
| 2 | PHR222 | Pharmaceutical analytical chemistry II | الكيمياء التحليلية الصيدلانية 2 | 2 | - | 1 | 3 | Pre: PHR214 |
| 3 | FMS223 | Physiology II | علم وظائف الاعضاء 2 | 2 | - | 1 | 3 | Pre: FMS215 |
| 4 | FMS224 | Histology | علم الانسجة | 2 | - | 1 | 3 | Pre: FMS212 |
| 5 | PHR225 | Pharmaceutical Organic chemistry II | الكيمياء العضوية الصيدلانية 2 | 2 | - | 1 | 3 | Pre: PHR217 |
| 6 | FMS226 | Pathology | علم الامراض | 2 | - | 1 | 3 | - |
| 7 | PHR227 | Pharmaceutics I | الصيدلانيات 1 | 2 | - | 1 | 3 | - |
| Total | | | | 14 | - | 7 | 21 | |

Level 3

| Term 1 | | | | | | | | |
|--------|-------------|---|----------------------------------|--------------|---|---|-------|------------------------------|
| No. | Course Code | Course Name | | Credit hours | | | | Prerequisites, Co-requisites |
| | | | | L | T | P | Total | |
| 1 | PHR311 | General Pharmacognosy I | علم العقاقير العام 1 | 2 | - | 1 | 3 | Pre: PHR226 |
| 2 | PHR312 | Pharmaceutical Microbiology I | علم الاحياء الدقيقة الصيدلانية 1 | 2 | - | 1 | 3 | Pre: FMS227 |
| 3 | PHR313 | Pharmacology & Therapeutics I | علم الأدوية و التداوي 1 | 2 | - | 1 | 3 | Co: PHR314 |
| 4 | PHR314 | Medicinal Chemistry I | الكيمياء الدوائية 1 | 2 | - | 1 | 3 | Co: PHR313 |
| 5 | PHR315 | Pharmaceutical Organic chemistry III | الكيمياء العضوية الصيدلانية 3 | 2 | - | 1 | 3 | Pre: PHR225 |
| 6 | PHR316 | Pharmaceutical analytical chemistry III | الكيمياء التحليلية الصيدلانية 3 | 2 | - | 1 | 3 | Pre: PHR222 |
| 7 | PHR317 | Pharmaceutics II | الصيدلانيات 2 | 2 | - | 1 | 3 | - |
| Total | | | | 14 | - | 7 | 21 | |
| Term 2 | | | | | | | | |
| No. | Course Code | Course Name | | Credit hours | | | | Prerequisites, Co-requisites |
| | | | | L | T | P | Total | |
| 1 | PHR321 | Pharmaceutical Microbiology II | علم الاحياء الدقيقة الصيدلانية 2 | 2 | - | 1 | 3 | Pre: PHR312 |
| 2 | PHR322 | General Pharmacognosy II | علم العقاقير العام 2 | 2 | - | 1 | 3 | Pre: PHR311 |
| 3 | PHR323 | Medicinal Chemistry II | الكيمياء الدوائية 2 | 2 | - | 1 | 3 | Co: PHR325 |
| 4 | PHR324 | Clinical Immunology | المناعة السريرية | 2 | - | 1 | 3 | Pre: PHR313 |
| 5 | PHR325 | Pharmacology & Therapeutics II | علم الأدوية و التداوي 2 | 2 | - | 1 | 3 | Co: PHR323 |
| 6 | PHR326 | Pharmaceutical Biotechnology | التكنولوجيا الحيوية الصيدلانية | 2 | - | - | 2 | - |
| 7 | PHR327 | Pharmaceutics III | الصيدلانيات 3 | 2 | - | 1 | 3 | Pre: PHR317 |
| Total | | | | 14 | - | 6 | 20 | |

Level 4

| Term 1 | | | | | | | | |
|--------|-------------|--|---------------------------------|--------------|---|---|-------|------------------------------|
| No. | Course Code | Course Name | | Credit Hours | | | | Prerequisites, Co-requisites |
| | | | | L | T | P | Total | |
| 1 | PHR411 | Biopharmaceutics & Pharmacokinetics I | الصيدلة الحيوية وحركية الدواء 1 | 2 | - | - | 2 | Pre: PHR325 |
| 2 | PHR412 | Pharmacology & Therapeutics III | علم الادوية والتداوي 3 | 2 | - | 1 | 3 | Co: PHR413 |
| 3 | PHR413 | Medicinal chemistry III | الكيمياء الدوائية 3 | 2 | - | 1 | 3 | Co: PHR412 |
| 4 | PHR414 | Phytochemistry I | كيمياء العقاقير 1 | 2 | - | 1 | 3 | Pre: PHR322 |
| 5 | PHR415 | Pharmacoeconomics | اقتصاديات الدواء | 2 | - | - | 2 | Pre: PHR324 |
| 6 | PHR416 | Community Pharmacy | صيدلة المجتمع | 2 | - | 1 | 3 | |
| 7 | PHR417 | Cosmetics | مستحضرات التجميل | 2 | - | 1 | 3 | Co: PHR412 |
| 8 | PHR418 | Pharmaceutics IV | الصيدليات 4 | 2 | - | 1 | 3 | Pre: PHR327 |
| Total | | | | 16 | - | 6 | 22 | |
| Term 2 | | | | | | | | |
| No. | Course Code | Course Name | | Credit Hours | | | | Prerequisites, Co-requisites |
| | | | | L | T | P | Total | |
| 1 | PHR421 | Pharmacology & Therapeutics IV | علم الادوية والتداوي 4 | 2 | - | 1 | 3 | Co: PHR422 |
| 2 | PHR422 | Medicinal chemistry IV | الكيمياء الدوائية 4 | 2 | - | 1 | 3 | Co: PHR421 |
| 3 | PHR423 | Biopharmaceutics & Pharmacokinetics II | الصيدلة الحيوية وحركية الدواء 2 | 2 | - | - | 2 | Pre: PHR411 |
| 4 | PHR424 | Phytochemistry II | كيمياء العقاقير 2 | 2 | - | 1 | 3 | Pre: PHR414 |
| 5 | PHR425 | Toxicology | علم السموم | 2 | - | 1 | 3 | Pre: PHR417, Co: PHR421 |
| 6 | PHR426 | Hospital pharmacy | صيدلة المستشفيات | 2 | - | - | 2 | Co: PHR423 |
| 7 | FMS427 | Medical Statistics | الإحصاء الطبي | 2 | - | - | 2 | Pre: PHR417 |
| 8 | PHR427 | Field Pharmacy Training 1(300 Hours) | تدريب ميداني 1 | - | - | - | - | - |
| Total | | | | 14 | - | 4 | 18 | - |

Level 5

| Term 1 | | | | | | | | |
|--------|-------------|---------------------------------------|-------------------------|----------------|---|---|-------|------------------------------|
| No. | Course Code | Course Name | | Credit Hours B | | | | Prerequisites, Co-requisites |
| | | | | L | T | P | Total | |
| 1 | FMS511 | Research methodology | طرق بحث | 1 | - | - | 1 | |
| 2 | PHR512 | Clinical pharmacy I | الصيدلة السريرية 1 | 2 | - | 1 | 3 | Pre: PHR426 |
| 3 | PHR513 | Industrial Pharmacy | الصيدلة الصناعية | 2 | - | - | 2 | Co: PHR514 |
| 4 | PHR514 | quality control | الرقابة الدوائية | 2 | - | 1 | 3 | Co: PHR513 |
| 5 | PHR515 | Nuclear Pharmacy | الصيدلة النووية | 2 | - | - | 2 | Pre: PHR421 |
| 6 | PHR516 | Applied Pharmacognosy I | علم العقاقير التطبيقي 1 | 2 | - | 1 | 3 | Pre: PHR424 |
| Total | | | | 12 | - | 3 | 14 | |
| Term 2 | | | | | | | | |
| No. | Course Code | Course Name | | Credit Hours | | | | Prerequisites, Co-requisites |
| | | | | L | T | P | Total | |
| 1 | PHR521 | Pharmaceutical marketing | التسويق الدوائي | 2 | - | - | 2 | Co: PHR525 |
| 2 | PHR522 | Clinical pharmacy II | الصيدلة السريرية 2 | 2 | - | 1 | 3 | Pre: PHR512 |
| 3 | PHR523 | Drug discovery & Development | تطوير واكتشاف الدواء | 2 | - | - | 2 | Pre: FMS511 |
| 4 | PHR524 | Applied Pharmacognosy II | علم العقاقير التطبيقي 2 | 2 | - | 1 | 3 | Co: PHR522 |
| 5 | FMS525 | Graduation project | مشروع التخرج | 2 | - | - | 2 | |
| 6 | PHR525 | Field Pharmacy Training 2 (300 Hours) | تدريب ميداني 2 | - | - | - | - | - |
| Total | | | | 10 | - | 2 | 12 | - |

14. Distribution of Credit Hours

| Level | Term | University Requirements | | Faculty Requirements | | Program Requirements | | Electives courses | | Total Cr. Hrs | | Total Cr. Hrs./ Level |
|--------|--------|-------------------------|--------------|----------------------|--------------|----------------------|--------------|-------------------|--------------|----------------|--------------|-----------------------|
| | | No. of Courses | Credit Hours | No. of Courses | Credit Hours | No. of Courses | Credit Hours | No. of Courses | Credit Hours | No. of Courses | Credit Hours | |
| First | First | 3 | 7 | 4 | 12 | 1 | 2 | 0 | 0 | 8 | 21 | 37 |
| | Second | 3 | 6 | 2 | 6 | 2 | 4 | 0 | 0 | 7 | 16 | |
| Second | First | 0 | 0 | 4 | 11 | 3 | 9 | 0 | 0 | 7 | 20 | 40 |
| | Second | 0 | 0 | 4 | 11 | 3 | 9 | 0 | 0 | 7 | 20 | |
| Third | First | 0 | 0 | 0 | 0 | 7 | 21 | 0 | 0 | 7 | 21 | 41 |
| | Second | 0 | 0 | 0 | 0 | 7 | 20 | 0 | 0 | 7 | 20 | |
| Fourth | First | 0 | 0 | 0 | 0 | 8 | 22 | 0 | 0 | 8 | 22 | 40 |
| | Second | 0 | 0 | 1 | 2 | 7 | 16 | 0 | 0 | 8 | 18 | |
| Fifth | First | 0 | 0 | 1 | 1 | 5 | 13 | 0 | 0 | 6 | 14 | 26 |

| | | | | | | | | | | | | |
|--------------------|--------|----------------|-----------|-----------------|-----------|-----------------|------------|----------|----------|----------|--------------|--|
| | Second | 0 | 0 | 1 | 2 | 4 | 10 | 0 | 0 | 5 | 12 | |
| Total: | | 6 | 13 | 17 | 45 | 47 | 126 | 0 | 0 | - | 184 | |
| Percentage: | | 7.027 % | | 24.864 % | | 68.108 % | | 0 | | | 100 % | |

15. Admission Requirements:

1. Admissions to the program shall be made as per the admission rules set by the Ministry of Higher Education and Scientific Research as well as University admission guidelines.
2. General Secondary school certificate (Science Section) or any equivalent certificate with grade as specified in the admission rules made by Ministry of Higher Education and Scientific Research.
3. Pass the aptitude test and personal interview.
4. Any necessary requirement for specialization, decided by the Scientific Section.

16. Attendance and Graduation Requirements:

1. Student attendance should not be less than 75%.
2. Student will graduate after successfully passing all program requirements.
3. Total credit hours for the program is 185 credit hours.
4. Minimum score for any student to pass any credit hours course is 50% degree.

17. Grading System:

| | |
|---------------------------------|-----------|
| From 90% to 100% of total marks | Excellent |
| From 80% to less than 90% | Very Good |
| From 65% to less than 80% | Good |
| From 50% to less than 65% | Pass |
| Less than 50% | Poor/Fail |

18. Facilities Required for Running the Program

Classrooms *

| No. | Name |
|-----|-----------------------------|
| 1. | Auditorium |
| 2. | Ibn albitar |
| 3. | Underground classroom No. 4 |
| 4. | 608 |
| 5. | 609 |
| 6. | 616 |
| 7. | 617 |
| 8. | Abn Cina |
| 9. | Ibn Hayan |

| Laboratories * | |
|----------------|---------------------------------------|
| | Name |
| 1. | Organic and analytical chemistry Lab. |
| 2. | Pharmaceutics & quality control Lab. |
| 3. | Pharmacognosy Lab. |
| 4. | Pharmacology Lab. |
| 5. | Educational Pharmacy |
| 6. | Microbiology Lab. |
| 7. | Medical parasitology Lab. |
| 8. | Anatomy Lab. |
| 9. | Physiology Lab. |
| 10. | Computer Lab. |

*: The classrooms and laboratories are supplied with necessary teaching tools, media, wares and instruments

19. Program Policies:

| Based on University Regulations | |
|---------------------------------|---|
| 1. | <p>(Class Attendance) :</p> <p>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) :</p> <p>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) :</p> <p>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) :</p> <p>In general one assignment is given to the students after each chapter; the student has to submit all the assignments for checking on time, mostly one week after given the assignment.</p> |
| 5. | <p>(Cheating) :</p> <p>For cheating in exam, a student will be considered as fail. In case the cheating is repeated</p> |

| | |
|----|--|
| | three times during his/her study the student will be disengaged from the Faculty. |
| 6. | (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. |
| 7. | (Other policies) : <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. |

20. Learning Resources:

| Learning Resources | Required Material |
|----------------------------------|--|
| References and Textbooks | Mentioned in each course specification |
| Scientific Journals | As required |
| Computers and Electronic Devices | There are 8 computer labs. |
| Computer software | - |
| Library needs | There is a central library in the university |
| Other Resources | - |

21. Program Evaluation:

21.1. Stakeholders Targeted & Evaluation methods

| # | Stakeholders Targeted | Assessment method | Sample |
|---|--|-------------------|--------|
| 1 | Last-Year Students | Questionnaire | 20 |
| 2 | Graduates | Questionnaire | 20 |
| 3 | Drug plant managers | Questionnaire | 5 |
| 4 | Hospital pharmacy manager | Questionnaire | 5 |
| 5 | Pharmaceutical importer Company (supervisors of Med. Rep.) | Questionnaire | 30 |

| | | | |
|-------|---------------------------|---------------|-----|
| 6 | Community Pharmacy owners | Questionnaire | 20 |
| Total | | | 100 |

21.2. Evaluation Committee:

| # | Evaluator Name | Specialization | Working at | Comments |
|---|--|-------------------------------------|--|----------|
| 1 | External evaluator 1 | ---- | CAQA | |
| 2 | External evaluator 2 | Pharmacy | Another university | |
| 3 | External evaluator 3 | Pharmacy | Another university | |
| 4 | Internal evaluator: Head of pharmacy department | Pharmacy | At the university | |
| 5 | Internal evaluator: Quality assurance | Quality assurance | Development & Quality Assurance Center | |
| 6 | Internal evaluator: Manager of marketing at the university | Business administration / Marketing | At the university | |

Faculty: Medical Sciences

Department: Pharmacy

Program: Bachelor of Pharmacy

ANNEX (2): NATIONAL ACADEMIC REFERENCE STANDARDS (NARS) FOR PHARMACY UNDERGRADUATE PROGRAMS ADOPTED BY THE COUNCIL FOR ACCREDITATION AND QUALITY ASSURANCE (CAQA)-YEMEN

ملحق 2: المعايير الأكاديمية المرجعية NARS للصيدلة – مجلس الاعتماد الأكاديمي وضمان الجودة

Republic of Yemen
Ministry of Higher Education and Scientific Research



Council for Accreditation and Quality Assurance

National Academic Reference Standards

Undergraduate Pharmacy Education Programs

May 2018

Faculty: Medical Sciences

Department: Pharmacy

Program: Bachelor of Pharmacy

Survey and alignment of vision and objectives of the program with similar accredited programs.

مسح رؤية ورسالة واهداف البرنامج مع البرامج المماثلة في الجامعات الاخرى

1- رؤية البرنامج Program Vision

| University | Azal university for Human development- Yemen | Najran University, Saudi Arabia | Sharjah University, United Arab Emirates | Arab American University , Palestine | Middle East University, Jordan | Al-Zaytoona university of Jordan, Jordan | Cairo university, Egypt |
|------------|---|---|--|--|---|---|---|
| Vision | Excellence in <u>pharmacy education, scholarly research, service to society and the profession, and thus improve the healthcare of the rural Appalachian community and is aspired to be the department of choice in Yemen and the region for learners and scholars.</u> | To achieve <u>educational and research leadership and service in pharmaceutical sciences at the local and regional.</u> | Not defined | Department vision Achieving <u>excellence in pharmaceutical education, scientific research, community service and pharmaceutical care, and strive to achieve international accreditation standards to raise the level and quality of education and research.</u> | Achieve academic and professional notability and competitiveness in the field of pharmaceutical sciences on local and international scales. | The program and department visions are not Defined Faculty vision <u>Excellence in pharmacy education, scientific research and community service</u> | Vision of the program or department are not defined Faculty vision The faculty of pharmacy –Cairo university maintains its <u>national leadership and continues its distinction</u> in the field of pharmacy |

2- رسالة البرنامج Program Mission

| University | Azal university for Human development- Yemen | Najran University, Saudi Arabia | Sharjah University, United Arab Emirates | Arab American University, Palestine | Middle East University, Jordan | Al-Zaytoonah university of Jordan, Jordan | Cairo university, Egypt |
|------------|--|---|--|--|--|--|---|
| Mission | To provide a comprehensive and progressive <u>Pharmacy education</u> that produce <u>competent pharmacist</u> who are supplied with knowledge , skills and ethics that make them able to carry out various missions of the profession and consequently improve the health and quality of life of <u>people in Yemen</u> . The program achieves its mission by providing <u>remarkable theoretical and practical courses</u> as well as optimum field training that are presented by high qualified <u>teaching staff</u> . | Preparation of <u>qualified and professional pharmacists</u> able to compete in the labor market, acquire the skills of problem-solving via scientific pharmaceutical research, and contribute to improving the health care for patients. | Our mission fully supports the <u>vision and mission</u> of the University of Sharjah in offering our students innovative, <u>challenging, and integrative educational and training</u> experiences designed to meet the needs of the dynamic healthcare environment and contribute to their personal growth and development.. | <u>Department mission</u> Graduating <u>highly qualified pharmacists</u> in the profession and achieving a leading role in <u>scientific research</u> and effective development in the community service. | Provide the labor market with <u>pharmacy professionals</u> equipped with <u>knowledge, skills</u> and ethics; and promote research and <u>community service</u> . | The program and department visions are <u>not Defined</u> <u>Faculty mission</u> Graduating <u>specialized pharmacists</u> with high qualifications in the profession and achieving a leading role in <u>scientific research</u> and effective development in serving the local <u>community</u> | Mission of the department and program are <u>not defined</u> <u>Faculty mission</u> We are committed to qualify <u>graduates who adhere to values and Ethics of the pharmacy profession</u> . <u>Graduates are able to</u> compete locally and internationally via academic and professional programs that meet the market need by using advanced <u>teaching strategies</u> . |

3- أهداف البرنامج Program Goals

| University | Azal university for Human development-Yemen | Najran University, Saudi Arabia | Sharjah University, United Arab Emirates | Arab American University, Palestine | Middle East University, Jordan | Al-Zaytoonah university of Jordan, Jordan | Cairo university, Egypt |
|------------|---|---|---|--|---|---|---|
| Goals | <p>7. To provide <u>excellent education</u> and professional development of pharmacy students.</p> <p>8. To equip the pharmacy graduates with fundamental <u>knowledge and skills</u> to enhance career opportunities within the pharmaceutical or biotechnology industries, academic pharmaceutical research, or pharmaceutical regulatory organizations.</p> <p>9. To foster interdisciplinary aspects between the program and <u>community development</u> needs.</p> <p>10. To conduct and promote applied research and problem-oriented basic research <u>as a vital element of pharmaceutical sciences.</u></p> | <p>1- To provide students with <u>basic knowledge and concepts</u> in the pharmaceutical field and related sciences.</p> <p>2- To provide student with the <u>basic skills for professional practice</u> in pharmacy</p> <p>3- To improve the health care for the community</p> <p>4- To develop the students' skills of scientific pharmaceutical research</p> <p>5- To improve students' career opportunities through the</p> | <p>Goals of the department and program are Not Defined</p> <p>Faculty goals Our faculty seeks to prepare <u>our students to perform independently and competently</u> by integrating academic <u>knowledge, practical experiences, and the professional values</u> expected a pharmacist into the student's training to prepare them to excel at the professional services they will offer over the course of their career in pharmacy.</p> | <p>1. Graduate highly qualified and professional <u>pharmaceutical graduates.</u></p> <p>2. Raise and improve the performance level of health services provided to the patient.</p> <p>3. Developing new programs in various pharmaceutical sciences, developing study plans and using modern teaching methods to suit the labor market and the <u>needs of the local community.</u></p> <p>4. Cooperate with <u>local and international pharmaceutical industries</u> in research and</p> | <p>Goals of the department and program are not defined</p> <p>Faculty aims 1. Produce <u>competent leaders</u> capable of competing on local and international scales. 2. <u>Offer distinct academic</u> programs within a modern educational environment. 3. Carry out effective community service and pharmaceutical care. 4. Conduct original research.</p> | <p>Goals of the department and program are not defined</p> <p>Faculty aims 1. Follow up the implementation of the executive plan emanating from the strategic plan in line with the college's vision, mission and values. 2. Follow up the decisions of the governance councils in the college and ensure their integrity and transparency. 3. Introducing new programs in the various pharmaceutical sciences, developing study plans, and using modern educational</p> | <p>The main aim of the undergraduate program is to <u>foster pharmacists</u> who can attain a successful career and provide skilled and ethical pharmaceutical care. This <u>is achieved through developing a program with an appropriate mix of basic, pharmaceutical, medical, social, behavioral management, health and environmental sciences.</u> <u>The multidisciplinary courses of our program</u> prepare our pharmacy graduates to work in any of the various fields of pharmacy including community pharmacies, hospitals, pharmaceutical firms, pharmaceutical Industrial companies</p> |

| | | | | | | |
|--|--|--------------------------------|--|--|---|---|
| | | pharmaceutical field training. | | <p>development in order to find new effective drugs.</p> <p>5. Supporting and developing scientific research to serve the Palestinian pharmaceutical industry and focusing on creativity, leadership and innovation.</p> <p>6. <u>Raising the level of scientific and professional performance</u> applied to pharmacists working in different fields.</p> <p>7. Create an <u>environment that leads to professional achievement</u> and development of faculty and staff.</p> <p>8. Offering practical solutions to the problems of the pharmaceutical industry.</p> <p>9. Activate the role of the <u>department in the service of</u></p> | <p>methods in line with the labor market and the needs of the local community.</p> <p>4. Promoting original and applied <u>scientific research</u> within the national priorities and focusing on creativity, leadership and innovation.</p> <p>5. Employing financial and material resources, qualifying human cadres, and directing them to participate and develop in all the activities of the college.</p> <p>6. To <u>continuously improve student services</u>, raise the level of job competition in the labor market, and activate communication with graduates.</p> <p>7. Activating the role of the college in community service and contributing to meeting its <u>needs and participating with relevant institutions locally and internationally, in a way that contributes to its development.</u></p> <p>8. Continuous work to</p> | <p>as <u>well as, academic and research institutes.</u></p> |
|--|--|--------------------------------|--|--|---|---|

| | | | | | | | |
|--|--|--|--|---|--|---|--|
| | | | | society and contribute to meet its needs and participation with relevant institutions locally and internationally to contribute to its development. | | obtain quality assurance certificates and achieve advanced positions in local and international classifications | |
|--|--|--|--|---|--|---|--|

Faculty: Medical Sciences

Department: Pharmacy

Program: Bachelor of Pharmacy

Survey of credit hours of similar programs.

مسح الساعات الاكاديمية في البرامج المعتمدة المماثلة للبرنامج الحالي

| # | The Academic Program اسم البرنامج المماثل | The University الجامعة | The Faculty الكلية | The Department القسم | The Country الدولة | Total Credit Hours |
|--|--|--|-----------------------|-------------------------|-----------------------|--------------------|
| This program هذا البرنامج | Bachelor of pharmacy | Azal University For Human development | Medical sciences | Pharmacy | Yemen | 184 * |
| The 1st Program البرنامج الاول | Pharmaceutical Sciences | Najran University | Pharmacy | Pharmacy | Saudi Arabia | 164 |
| The 2nd Program البرنامج الثاني | Bachelor of pharmacy | Sharjah University | Pharmacy | Pharmacy | United Arab Emirates | 170 |
| The 3rd Program البرنامج الثالث | Bachelor of pharmacy | Arab American University | Pharmacy | Pharmacy | Palestine | 167 |

| # | The Academic Program اسم البرنامج المماثل | The University الجامعة | The Faculty الكلية | The Department القسم | The Country الدولة | Total Credit Hours |
|--|--|----------------------------------|-----------------------|-------------------------|-----------------------|--------------------|
| The 4 th Program البرنامج الرابع | BSc in pharmacy | Middle East University | Pharmacy | Pharmacy | Jordan | 165 |
| The 5 th Program البرنامج الخامس | Bachelor of pharmacy | Al-zaytoona University of Jordan | Pharmacy | Pharmacy | Jordan | 160 |
| The 6 th Program البرنامج السادس | Bachelor of pharmacy | Cairo university | Pharmacy | Pharmacy | Egypt | 163 |
| 1. AVERAGE | | | | | | 168 |

*: 184 total credit hours of the program is actually **167** credit hours because 13 credit hours included in the program are university requirements which are not found in most of the References universities

Faculty: Medical Sciences

Department: Pharmacy

Program: Bachelor of Pharmacy

Survey of total number of courses of similar programs.

مسح عدد المقررات الدراسية في البرامج المعتمدة المماثلة للبرنامج الحالي

| # | The Academic Program اسم البرنامج المماثل | The University الجامعة | The Faculty الكلية | The Department القسم | The Country الدولة | Total Number of courses |
|--|--|--|-----------------------|-------------------------|-----------------------|-------------------------|
| This program هذا البرنامج | Bachelor of pharmacy | Azal University For Human development | Medical sciences | Pharmacy | Yemen | 70 |
| The 1st Program البرنامج الاول | Pharmaceutical Sciences | Najran University | Pharmacy | Pharmacy | Saudi Arabia | 67 |
| The 2nd Program البرنامج الثاني | Bachelor of pharmacy | Sharjah University | Pharmacy | Pharmacy | United Arab Emirates | 60 |
| The 3rd Program البرنامج الثالث | Bachelor of pharmacy | Arab American University | Pharmacy | Pharmacy | Palestine | 82 |

| # | The Academic Program اسم البرنامج المماثل | The University الجامعة | The Faculty الكلية | The Department القسم | The Country الدولة | Total Credit Hours |
|--|--|----------------------------------|-----------------------|-------------------------|-----------------------|--------------------|
| The 4 th Program البرنامج الرابع | BSc in pharmacy | Middle East University | Pharmacy | Pharmacy | Jordan | 72 |
| The 5 th Program البرنامج الخامس | Bachelor of pharmacy | Al-zaytoona University of Jordan | Pharmacy | Pharmacy | Jordan | 85 |
| The 6 th Program البرنامج السادس | Bachelor of pharmacy | Cairo university | Pharmacy | Pharmacy | Egypt | 58 |
| AVERAGE | | | | | | 70 |

Faculty: Medical Sciences

Department: Pharmacy

Program: Bachelor of Pharmacy

ALIGNMENT OF PROGRAM INTENDED LEARNING OUTCOMES (PILOS) TO THE FACULTY GOALS.

ربط مخرجات تعلم البرنامج مع أهداف الكلية

| Faculty Goals | PILOs | | | |
|--|--------------------------------------|------------------------------|--|------------------------------|
| | Knowledge & Understanding A1- A12 | Intellectual skills B1-B9 | Professional & practical skills C1-C7 | Transferable skills D1-D5 |
| 7. Raising and developing Medical sciences Education and outcomes | ✓ | | ✓ | |
| 8. Achieving superiority in academic, instructional and learning aspects of graduate and postgraduate programs | ✓ | | ✓ | |
| 9. Enhancing the effectiveness of its teaching staff to augment student learning | ✓ | ✓ | ✓ | ✓ |

| Faculty Goals | PILOs | | | |
|--|--------------------------------------|------------------------------|--|------------------------------|
| | Knowledge & Understanding A1- A12 | Intellectual skills B1-B9 | Professional & practical skills C1-C7 | Transferable skills D1-D5 |
| 10. Establishing and improving medical sciences learning environment and resources | | | ✓ | |
| 11. Potentiating the students ingenuity and their personal, academic and social development | | | | ✓ |
| 12. Augmenting the relationship with local, regional and international medical academic institutions in the field of scientific research | ✓ | | ✓ | ✓ |

Faculty: Medical Sciences

Department: Pharmacy

Program: Bachelor of Pharmacy

Alignment of program intended learning outcomes (PILOs) to the program goals.

ربط مخرجات تعلم البرنامج مع أهداف البرنامج

| Program Goals | PILOs | | | |
|--|--------------------------------------|------------------------------|--|------------------------------|
| | Knowledge & Understanding A1- A12 | Intellectual skills B1-B9 | Professional & practical skills C1-C7 | Transferable skills D1-D5 |
| 11. To provide excellent education to pharmacy students. | ✓ | | ✓ | |
| 12. To equip pharmacy graduate students with fundamental knowledge and skills to enhance career opportunities. | ✓ | | ✓ | |
| 13. To develop the teaching capability and skills of the teaching staff working in the program | ✓ | ✓ | ✓ | ✓ |

| Program Goals | PILOs | | | |
|--|--------------------------------------|------------------------------|--|------------------------------|
| | Knowledge & Understanding A1- A12 | Intellectual skills B1-B9 | Professional & practical skills C1-C7 | Transferable skills D1-D5 |
| 1. To update learning resources applied by the programs. | | | ✓ | |

| | | | | |
|--|---|--|---|---|
| 2. To develop the personal , creative and social development of the student character. | | | | ✓ |
| 3. To conduct applied research and problem-oriented basic research directed for the favor of community with cooperation with academic, industrial and healthcare institutions | ✓ | | ✓ | ✓ |

Faculty: Medical Sciences

Department: Pharmacy

Program: Bachelor of Pharmacy

ALIGNMENT OF PROGRAM INTENDED LEARNING OUTCOMES (PILOS) TO NARS FOR PHARMACY UNDERGRADUATE PROGRAMS ADOPTED BY THE COUNCIL OF ACCREDITATION AND QUALITY ASSURANCE (CAQA)-YEMEN.

ربط مخرجات تعلم البرنامج مع المعايير المرجعية الوطنية NARS

| Program PILOs | NARS for Pharmacy undergraduate programs adopted by CAQA-Yemen |
|--|--|
| <p>A. Knowledge and Understanding: Upon successful completion of the undergraduate Bachelor of Pharmacy Program, the graduates will be able to:</p> <p>A1. Show understanding of fundamentals of biomedical sciences, physics, mathematics and chemistry and organization of human body. A2. Explain the fundamental of social and behavioral sciences. A3. Explain physicochemical properties of materials and products A4. Describe analytical methods, principles, design and development techniques A5. Identify actions of medicines on human body. A6. Explain the basis of complementary and alternative medicines A7. Identify types of poisons and mechanisms and actions of poisoning</p> <p>A8. Describe Biopharmaceutics and pharmacokinetics of medicines A9. Define the basis of health policy, Pharmacoeconomics, pharmacoepidemiology, pharmaceutical marketing and administration. A10. Describe the pharmacists role in different pharmacy practices.</p> | <p>A. Knowledge and Understanding: Upon successful completion of the undergraduate Bachelor of Pharmacy Program, the graduates will be able to:</p> <p>A1. Show understanding of fundamentals of biomedical sciences, physics, mathematics and chemistry and organization of human body. A2. Explain the fundamental of social and behavioral sciences. A3. Explain physicochemical properties of materials and products A4. Describe analytical methods, principles, design and development techniques A5. Identify actions of medicines on human body. A6. Explain the basis of complementary and alternative medicines A7. Identify types of poisons and mechanisms and actions of poisoning</p> <p>A8. Describe Biopharmaceutics and pharmacokinetics of medicines A9. Define the basis of health policy, Pharmacoeconomics, pharmacoepidemiology, pharmaceutical marketing and administration. A10. Describe the pharmacists role in different pharmacy practices.</p> |

A11. Identify the properties of dosage forms and novel drug delivery systems.

A12. Describe the methods of biostatistics and pharmaceutical calculations

B. Cognitive/ Intellectual Skills:

Upon successful completion of an undergraduate Networks and Information Security program, graduates should be able to:

B1. Collect interpret and assess information and data relevant to pharmacy practice

B2. Classify drugs, approaches and other information relevant to pharmacy based on scientific classification system.

B3. Design an evaluate different types of safe and effective drugs, pharmaceutical dosage forms and cosmetic preparations

B4. Select appropriate standard operation procedures to conduct qualitative and quantitative analysis.

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

B6. Develop and design suitable methods for extraction of active medicinal agents from various sources.

B7. Formulate and evaluate patient care plan about rational drug use of medications.

B8. Use appropriate research methods including experimental, observational and electronic to collect data and solve problems.

B9. Apply mathematical equations to calculate data relevant to pharmacy practices

C. Practical and Professional Skills:

Upon successful completion of an undergraduate Networks and Information Security program, graduates should be able to:

C1. Handle safely the chemicals, biological samples and pharmaceutical ingredients and products.

C2. Operate different instruments and use emerge technologies for

A11. Identify the properties of dosage forms and novel drug delivery systems.

A12. Describe the methods of biostatistics and pharmaceutical calculations

B. Cognitive/ Intellectual Skills:

Upon successful completion of an undergraduate Networks and Information Security program, graduates should be able to:

B1. Collect interpret and assess information and data relevant to pharmacy practice

B2. Classify drugs, approaches and other information relevant to pharmacy based on scientific classification system.

B3. Design an evaluate different types of safe and effective drugs, pharmaceutical dosage forms and cosmetic preparations

B4. Select appropriate standard operation procedures to conduct qualitative and quantitative analysis.

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

B6. Develop and design suitable methods for extraction of active medicinal agents from various sources.

B7. Formulate and evaluate patient care plan about rational drug use of medications.

B8. Use appropriate research methods including experimental, observational and electronic to collect data and solve problems.

B9. Apply mathematical equations to calculate data relevant to pharmacy practices

C. Practical and Professional Skills:

Upon successful completion of an undergraduate Networks and Information Security program, graduates should be able to:

C1. Handle safely the chemicals, biological samples and pharmaceutical ingredients and products.

C2. Operate different instruments and use emerge technologies for

preformulation, formulation and analysis of materials according to standard guidelines.

C3. Screen for drugs from different sources and carry out pharmacy relevant experiments successfully.

C4. Advice patients and healthcare professionals to optimize medicines use.

C5. Employ the relevant ways to produce extemporaneous preparations including TPN and IV admixtures.

C6. Apply administrative and Pharmacoeconomics rules in pharmacy and ethically use marketing skills for drug promotion.

C7. Conduct research and utilize the results in different pharmaceutical fields.

D. General and Transferable Skills:

Upon successful completion of an undergraduate Networks and Information Security program, graduates should be able to:

D1. Interact and communicate effectively and behave in disciplines with colleagues, patients and healthcare professionals effectively in team-activities.

D2. Develop and demonstrate skills of time managements, self-learning and decision making.

D3. Participate collaboratively in team work with colleagues and healthcare professionals.

D4. Take the responsibility for adaption to change needs in pharmacy practice.

D5. Retrieve essential references of evidence-based to achieve maximal clinical effectiveness

preformulation, formulation and analysis of materials according to standard guidelines.

C3. Screen for drugs from different sources and carry out pharmacy relevant experiments successfully.

C4. Advice patients and healthcare professionals to optimize medicines use.

C5. Employ the relevant ways to produce extemporaneous preparations including TPN and IV admixtures.

C6. Apply administrative and Pharmacoeconomics rules in pharmacy and ethically use marketing skills for drug promotion.

C7. Conduct research and utilize the results in different pharmaceutical fields.

D. General and Transferable Skills:

Upon successful completion of an undergraduate Networks and Information Security program, graduates should be able to:

D1. Interact and communicate effectively and behave in disciplines with colleagues, patients and healthcare professionals effectively in team-activities.

D2. Develop and demonstrate skills of time managements, self-learning and decision making.

D3. Participate collaboratively in team work with colleagues and healthcare professionals.

D4. Take the responsibility for adaption to change needs in pharmacy practice.

D5. Retrieve essential references of evidence-based to achieve maximal clinical effectiveness

Faculty: Medical Sciences

Department: Pharmacy

Program: Bachelor of Pharmacy

Matrix of mapping program intended learning outcomes (PILOS) with the program courses.

خارطة تسكين مخرجات تعلم البرنامج مع المقررات الدراسية

| No | Course name | Course code | A knowledge & understanding | | | | | | | | | | | | B intellectual skills | | | | | | | | | C. Professional & practical skills | | | | | | | D. Transferable skills | | | | | | | | | | | |
|-----|--------------------------|-------------|--------------------------------|---|---|---|---|---|---|---|---|----|----|----|--------------------------|---|---|---|---|---|----|---|---|---------------------------------------|---|---|---|---|---|---|---------------------------|---|---|---|---|---|---|---|---|--|--|--|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 | 2 | 3 | 4 | 5 | | | | | | | |
| 1. | Arabic language I | AZA111 | ✓ | | | | | | | | | | | | | ✓ | | | | | | | | | | | | | | | | | | | | | | | ✓ | | | |
| 2. | Computer skills | AZA112 | ✓ | | | | | | | | | | | | | ✓ | | | | | | | | | | | | | | | | | | | | | ✓ | ✓ | | | | |
| 3. | Medical Physics | FMS113 | ✓ | | | | | | | | | | | | | ✓ | | | | | | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | |
| 4. | Biology | FMS114 | ✓ | | | | | | | | | | | | | ✓ | | | | | | | ✓ | ✓ | ✓ | | | | | | | | | ✓ | ✓ | ✓ | | | | | | |
| 5. | General Chemistry | FMS115 | ✓ | | ✓ | | | | | | | | | | | ✓ | | | | | | | | ✓ | ✓ | | | | | | | | | ✓ | ✓ | ✓ | | | | | | |
| 6. | English language I | AZA116 | | | ✓ | | | | | | | | | | | ✓ | | | | | | | | | | | | | | | | | | | | | ✓ | ✓ | | | | |
| 7. | Introduction to Pharmacy | PHR117 | | | | | | | | | | ✓ | | | | | ✓ | | | | | | | | | | | | | | | | | | | | | ✓ | ✓ | | | |
| 8. | Medical terminology | FMS118 | ✓ | | | | | | | | | | | | | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | ✓ | ✓ | | | |
| 9. | Arabic language II | AZA121 | ✓ | | | | | | | | | | | | | ✓ | | | | | 8i | | | | | | | | | | | | | | | | | | ✓ | | | |
| 10. | English language II | AZA122 | | | ✓ | | | | | | | | | | | ✓ | | | | | | | | | | | | | | | | | | | | | | ✓ | ✓ | | | |

| No No | Course name | Course Code | A | | | | | | | | | | | | B | | | | | | | | C. | | | | | | D. | | | | | | | | | | |
|----------|---------------------------------------|----------------|---------------------------|---|---|---|--|--|--|--|--|--|---|--|---------------------|--|---|---|---|---|--|--|---------------------------------|--|--|--|--|--|---------------------|--|--|---|---|---|---|---|---|---|---|
| | | | knowledge & understanding | | | | | | | | | | | | intellectual skills | | | | | | | | Professional & practical skills | | | | | | Transferable skills | | | | | | | | | | |
| | Islamic culture | AZA123 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. | Psychology | FMS124 | ✓ | | ✓ | ✓ | | | | | | | | | | | ✓ | | ✓ | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | | | | |
| 3. | First aid | FMS125 | ✓ | | | | | | | | | | ✓ | | | | ✓ | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | | | |
| 4. | Pharmaceutical Calculations | PHR126 | | | | | | | | | | | ✓ | | | | ✓ | | | | | | | | | | | | | | | | | | ✓ | ✓ | | | |
| 5. | Mathematics | PHR127 | ✓ | | | | | | | | | | | | | | ✓ | | | | | | | | | | | | | | | | | | ✓ | ✓ | | | |
| 6. | Medical Ethics | FMS211 | | ✓ | | | | | | | | | ✓ | | | | | | | ✓ | | | | | | | | | | | | | | ✓ | ✓ | ✓ | | | |
| 7. | Anatomy | FMS212 | ✓ | | | | | | | | | | | | | | ✓ | | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | | |
| 8. | Biochemistry I | FMS213 | ✓ | | ✓ | | | | | | | | | | | | ✓ | ✓ | | ✓ | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | |
| 9. | Pharmaceutical analytical chemistry I | PHR214 | | | ✓ | ✓ | | | | | | | | | | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ |
| 10. | Physiology I | FMS215 | ✓ | | | | | | | | | | | | | | ✓ | | | | | | | | | | | | | | | | | | | ✓ | ✓ | | |

| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 | 2 | 3 | 4 | 5 |
|-----|--|--------|---|---|---|---|---|---|---|---|---|----|----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Physical Pharmacy | PHR216 | | | ✓ | | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | | |
| 2. | Pharmaceutical Organic chemistry I | PHR217 | ✓ | | ✓ | | | | | | | | | | ✓ | | ✓ | | | | | | | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | | | |
| 3. | Biochemistry II | FMS221 | ✓ | | ✓ | | | | | | | | | | ✓ | ✓ | | ✓ | | | | | | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | | |
| 4. | Pharmaceutical analytical chemistry II | PHR222 | | | ✓ | ✓ | | | | | | ✓ | | | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | | | |
| 5. | Physiology II | FMS223 | ✓ | | | | | | | | | | | | ✓ | | | | | | | | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | | | |
| 6. | Histology | FMS224 | ✓ | | | | | | | | | | | | | ✓ | | | | | | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | | | |
| 7. | Pharmaceutical Organic chemistry II | PHR225 | ✓ | | ✓ | | | | | | | | | | ✓ | | ✓ | | | | | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | | | |
| 8. | pathology | PHR226 | | | | | ✓ | | | | | | | | | | | | ✓ | | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | | | | |
| 9. | Pharmaceutics I | FMS227 | ✓ | | | ✓ | | | | | | ✓ | | | ✓ | ✓ | | ✓ | | | | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | | | | | |
| 10. | General Pharmacognosy I | PHR311 | | | | ✓ | | ✓ | | | ✓ | | | | | ✓ | ✓ | | | | | | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | | | | |