**Republic of Iraq**



**Ministry of Higher Education**

**And Scientific Research**

**University of Baghdad**

**College of Pharmacy**



**Self-Assessment Report**

**Clinical pharmacy Program –**

**Part of Bachelor of Science in pharmacy**

**Clinical pharmacy Department**

**College of Pharmacy – University of Baghdad**

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**Ministry of Higher Education & Scientific Research**

**University of Baghdad – College of pharmacy**

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| **Clinical pharmacy Department**  **Self-Assessment Report**  ***PREFACE***  The present report is the self-assessment report written for the Department of clinical pharmacy at the College of pharmacy - University of Baghdad. The report represents the first step towards achieving Quality Assurance in accordance with international standards, which is a strategic and important decision for the scientific and educational process of the department. The report coincides with a wide and comprehensive campaign carried out by the College of pharmacy and University of Baghdad in this area and under a central guidance and support from the Iraqi Ministry of Higher Education and Scientific Research (MOHESR).  In writing the report, we have rely mainly on the template of a self-assessment report issued by the UNESCO Iraq Office (Amman), in addition to a number of similar reports of a number of Arab and international universities that have already presented such a report.  The report includes in its first and second parts a definitive introduction to the department and its history, scientific disciplines and awarded degrees, the system of study and curriculum, organizational structure, the general features of the policy of the department in the various fields and aspects ... etc. After that, the report reviews the required criteria for the self-assessment and the related appendices according to specifications of SAR.  The report also contains a very important article, that is a SWOT analysis for the (Strengths, Weaknesses, Opportunities, and Threats) of the department. SWOT analyses is a very important tool for planning and developing strategies and policies for the office in question, and we have tried in our writing of this paragraph to be very precise in our diagnosis of the strengths and weaknesses, as well as opportunities and threats facing the scientific and educational process of the department.  We hope that we have been successful in our writing of this report, and that we achieve the minimum requirements of SAR. We hope that the report receives the attention of the experts involved in the UNESCO Iraq Office and to enrich it with their valuable observations to help us in guiding the department in the right direction towards ensuring quality and reliability of the educational system of ME program according to international specifications and standards |

Chapter One

**Introduction**

The department of clinical pharmacy, University of Baghdad established in 1992 in order to offer educational programs that cover scientific fields include: clinical pharmacy, therapeutics, pharmocoeconomics, hospital training, therapeutic drug monitoring and pharmacy ethics. These courses required as a part of the requirement for the Bachelor Degree (B.Sc.) in Pharmacy. In addition to the undergraduate courses, the department also offer postgraduate study courses that include: Diploma in pharmaceutical sciences (clinical pharmacy), Master of Science in pharmaceutical sciences (clinical Pharmacy) (M.Sc.), and Doctor of Philosophy in pharmaceutical sciences (Clinical Pharmacy) (Ph.D).

1-1 vision and mission statements

1-1-1 Vision

The department aims to be one of the leading programs in the country and region regarding clinical pharmacy and patient education and research.

1-1-2 Mission

1- Graduating highly qualified ethical pharmacists.

2. Building the leadership qualities in graduates through teaching how to lead, problem solving, team work, quality considerations, and professionalism at work.

3. Instilling in graduates the spirit and commitment for acquiring knowledge and community service.

4. Contributing ideas of projects and carrying out research for the benefit and development of the community.

5. Nurturing and care of outstanding students and encouraging them to use their skills.

6. Student counselling, guidance and strengthening of citizenship spirit.

7. Providing good working environment for students, faculty, and other personnel with emphasis on high academic, professional and ethical standards within the university campus. Freedom of opinions and respect of others opinions and encouragement in exchanging knowledge.

1-2 Department Educational Objectives (DEO)

Since its establishment, the department worked hardly and continuously based on his noble mission in the society to achieve a number of strategically goals and objectives, the most important are:

1. make the graduated students able be familiar with reading and processing the medicine prescription
2. make the graduated students able to communicate with the patient
3. make the graduated students able to educate the patients about their medications
4. make the graduated students able to dispense medications in prescriptions in hospitals and community pharmacy safely
5. Doses specifications by therapeutic drug monitoring
6. Learning Outcomes, Teaching, Learning and Assessment Methods
7. Graduate pharmacists to serve society in the health sector like pharmacies, and hospitals.
8. Improving al pharmacy and therapeutics educational program of the comparable colleges in the country.
9. Leading and improving vital applied scientific research in clinical pharmacy that could find suitable markets in the country and abroad.
10. Cooperate with other health institutions to conduct research, and to improve clinical pharmacy education.
11. Support other colleges of Pharmacy in the country with qualified faculties through the postgraduate programs.

**1-2-1 Consistence of the Program Educational Objectives with the Mission and Activities of the pharmacy College of BU**

The clinical pharmacy Department PEOs is aligned well, closely linked to, and consistent with the department’s mission. The first one of the objectives (PEO-1) provides the first step towards a career of achievement and service. The needed background of knowledge and skills are acquired to achieve this objective. Students acquire quality education through several avenues, including knowledge, skills and values as reflected in PE-1. The professional and ethical issues are also preserved in (PEO-1). PEOs 2 -6 ensure the qualities for self-development and professional growth and improvement of the faculty, administrative and technical staff.

The Department PEOs are closely linked to, and consistent with, the University of Baghdad and College of pharmacy education missions. The University and College missions are directly served by the first, third and sixth Department PEOs.

**1.2.2 Process for Establishing Program Educational Objectives PEO Definition**

The primary function of the clinical pharmacy program that is compatible with the missions of the College of pharmacy of BU is to instill in its graduates a solid foundation of therapeutic, scientific, and clinical pharmacy knowledge in addition to developing the intellectual skills essential for excelling in their careers. The PEOs were discussed with all faculty members in several departmental meetings. ***Objective #1*** make the graduated students able be familiar with reading and processing themedicine prescription

***Objective #2*** focuses on the improvement, development and qualification of the teaching and administrative activities of the department. ***Objectives #3 & #4*** concentrate on the development and improvement of the faculty, staff capabilities. ***Objectives #5*** considers the optimum use of the department facilities and resources, and improvement and qualification of these facilities. ***Objectives #6*** is related to the engagement and cooperation of the department with the highly qualified and developed universities and countries in order to improve and develop the clinical pharmacy Program of the department. ***Objectives #7*** focuses on the scientific research activities of the department and how it can be directed towards the service of community, government and state.

**PEOs Review**

The process of review and evaluation of the clinical pharmacy department is done through the following assessment channels:

1. Alumni survey.

2. Employer’s survey.

3. Faculty discussion.

4. Student’s survey.

5. Related institutions consultations (e.g. hospitals, factories, research centers).

**1-3 Program Outcomes**

The outcomes of clinical pharmacy program are:

a. An ability to apply knowledge of therapeutics, patient communication , and therapeutic drug monitoring.

b. An ability to design and conduct researches, as well as to analyze and interpret data.

c. An ability to design a formulations to meet desired needs.

d. An ability to function on multi-disciplinary teams.

e. An ability to identify, formulates, and solves drug abuse problems.

f. An understanding of professional and ethical responsibility.

g. An ability to communicate effectively.

h. The broad education necessary to understand the impact of clinical pharmacy in a global and societal context.

i. A recognition of the need for, and an ability to engage in life-long learning.

j. An ability to recognize of drug interactions and drug misuse.

k. An ability to use the techniques, skills, and modern pharmaceutical tools necessary for pharmacy practice

The program outcomes are closely linked to the program educational objectives. The relationship illustrating the program outcomes serving each objective is mapped in Table (1-1).

|  |  |
| --- | --- |
| PEOs | Program Outcome |
| 1-Graduate pharmacists to serve society in the health sector like hospitals, pharmacies and laboratories, industrial sector | a,b,c,d,e,f,g,h,j,k |
| 2- Improving clinical pharmacy and therapeutic educational program of the comparable colleges in the country | b,d,e,f,g,h,i,k |
| 3- Leading and improving vital applied scientific research in clinical pharmacy and therapeutics that could find suitable markets in the country and abroad. | a,b,c,d,e,f,g,h,i,j,k |
| 4- Cooperate with other health institutions to conduct research, and to improve clinical pharmacy education | a,b,c,d,e,f,g,h,I,i,k |
| 5- Support other colleges of Pharmacy in the country with qualified faculties through the postgraduate programs | a,b,c,d,e,f,g,h,i,j,k |
| 6-Optimum use of resources and potentials of the department | a,b,c,d,g,i,k |

**1-4 Continuous Improvement**

The most important responsibilities and tasks performed in the department for the purpose of continuous improvement of the educational program are:

1. **Organize Information Used for the Program Improvement:** Continuous improvement of the educational program is a continuous task that is carried out by the Department through the Scientific Committee and the specialized committees branched from it. Curriculum revisions or corrective actions proposed by either of the above committees are presented to all department faculty members in General Board meetings for discussion, review, and approval. The department faculty actively participates in board discussions leading to a finalized set of curriculum revisions and / or corrective actions.
2. **Actions to Improve the Program** Continuous improvement is a focus of the department and is done every day as a natural part of our profession. We strive always to improve processes that are weak and fix processes that are broken. We have not set “degrees of attainment” goals for each of the outcomes. We attempt to work on every deficit we uncover in our efforts to achieve outcomes. We expect every instructor to continuously improve the performance of students in his / her subjects, whether they are currently at low or high level. The following specific actions have either been successfully implemented or are in process.

1. Comprehensive changes in curriculum in each academic year.

2. Continuous improvement of faculty through training programs.

3. Promoting a number of faculty members to higher ranks.

4. Purchasing a number of laboratory equipment and instruments.

5. Purchasing a number of books for the library of the department.

6**.** Purchasing a number of computers. .

9. Increase in extra-curricular activities for students such as setting up scientific conferences and seminars.

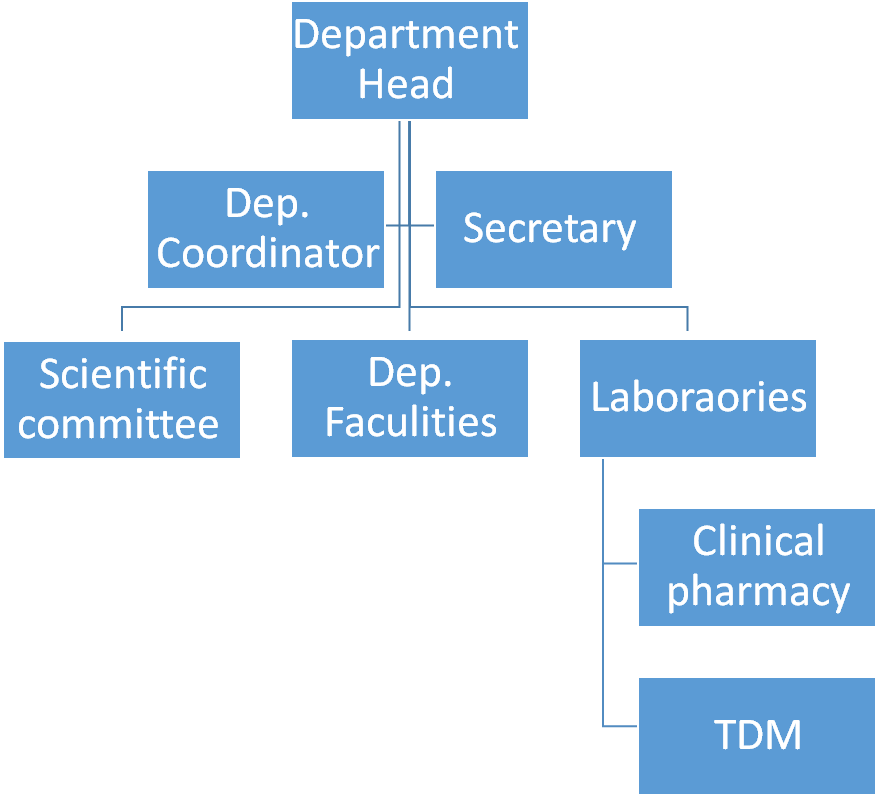
10. Reconstruction and rehabilitation of classrooms and rooms in the department, as well as services.

**Chapter 2**

**HISTORY AND ORGANIZATIONAL STRUCTURE**

**2-1 Organizational Structure**

The scientific, technical and administrative structure of the Department at the includes a set of integrated elements. Each one of these elements of the structure has authorities, duties and responsibilities which are specified accurately so that the department can works well and achieve the required goals through the integrity of work of these elements. The figure (2.1) shows the organizing structure of the department.



**Figure 1-1: Organizational structure of the department.**

**SWOT Analysis for clinical pharmacy department**

**2.4.1 SWOT Analysis for the Organizational Structure**

In carrying out the SWOT analysis for the ME Program, a balanced approach has been adopted which views all facilities in each section. The assessment of strengths and weaknesses are facilitated through surveys and information gathering activities of the committees and documentation in the department, and the evidence provided by the faculty and associates. The external look to identify opportunities and threats is considered complimentary to the internal self-study in the SWOT analysis. National and regional influences and concerns are of paramount importance when deciding about the strategies and actions to address the weaknesses. Furthermore, any strategic planning should also address the local and regional threats. Though no formal survey has been conducted to identify the opportunities and threats, group brainstorming, extensive consultations with knowledgeable faculty, review of local, regional and international developments, a thorough review of existing literature on engineering education, lead to the identification of the most relevant opportunities and threats. Figure (2.2) shows the SWOT analysis for the organizational structure of the clinical pharmacy department

Therefore, the following strategic objectives have been developed to address the weaknesses and threats related to various aspects of those issues… 1. Recruit, nurture and retain outstanding students. 2. Honoring, caring and retain outstanding faculty and staff. 3. Promote a strong sense of community and collegiality among the students, faculty, staff and alumni. 4. Improve teaching and learning through continuous assessment. 5. Promote research and consultation that address the immediate and long-term needs of the society. 6. Create a strong relationship with society in particular with industry to cooperate in the advancement of the country’s economy. 7. Continue to develop and maintain an adequate infrastructure.

|  |  |
| --- | --- |
| **STRENGTHS (INTERNAL )** | **WEAKNESSES (INTERNAL)** |
| **1-Faculty**  **a) A very good experience in academic education for the faculty members.**  **b) A very good number of young and dynamic faculty members.**  **c) Sufficient number of faculty members.**  **d) Excellent and versatile academic backgrounds.**  **e) Great loyalty and affiliation to the department, college and university for most faculty members.**  **f) Good salaries and wages.**  **2-Curriculum**  **a. Designed to meet both local needs and international standards.**  **b. Strong pharmaceutical science components.**  **c. Availability of a good variety of general education subjects.**  **d. A well-structured laboratory experience.**  **e. A strong professional component.**  **f. There is constancy throughout the years of study in the process of “pumping” subjects from the three specialties of the department, so that there is no gap in the four years of study where the student does not take a subject from one of the three specialties.**  **3. A very well specifically defined responsibilities and authorities for all committees of the department.**  **4. The long and rich history, as well as the good reputation of the department.**  **5. Large and continuous desire for development, and strong motivation for service for most employees of the department.**  **6. Good social relationships between employees of the department.**  **7. Good relationships between employees and students of the department.** | **1. Deficiencies in certain outcomes in graduating students.**  **b) Design / real world applications.**  **c) Contemporary technical and economic issues.**  **2-Quality and quantity of current students.**  **a) The lack of motivation to excel.**  **b) The culture of being “spoon-fed”.**  **c) Inadequate language preparation.**  **d) Inadequate training in critical or analytical thinking.**  **3. Inappropriate mode of teaching.**  **a. Inadequate classroom assessment.**  **b. Increasing proportion of new faculty with limited teaching experience due to inadequate training programs for development.**  **4. Large proportion of faculty with limited industrial and research experience.**  **a) Poor rehabilitation programs for faculty members.**  **b) Poor relationship with international research centers and academic institutions.**  **5-Inconsistencies in the quality of supporting staff.**  **Pharmacists (Teaching Assistants)**  **6. Insufficient space for expansion.**  **a) Limited extension and expansion of the department, allowing being productive.**  **b) Limited excellence for scientific research locally and regionally.**  **7-Complicated decision-making process at the College level.**  **a) Complicated and restrictive purchasing procedures.**  **b) Complicated and restrictive hiring procedures.**  **9. Insufficient funding for;**  **a) Research.**  **b) Teaching improvement.**  **c) Hiring adequate human resources.**  **d) Maintaining and upgrading facilities.**  **9. Weak contact and weak alumni relations.** |
| **OPPORTINITIES (EXTERNAL)** | **THREATS (EXTERNAL)** |
| **1. Available faculty development opportunities.**  **a) Institutional support for sabbaticals travels.**  **b) Availability of international conferences, workshops, seminars etc.**  **c) Possibility of utilizing local talent for teaching and research. .**  **2. New trends in multi-disciplinary professional education and new teaching methods.**  **a. Possibility of re-designing curriculum and by-laws to allow multi-disciplinary teaching and learning.**  **b. Possibility of utilizing e-learning and distance education.**  **3. Young and dynamic society.**  **a) A good pool for potential students.**  **b) Readiness to accept changes.**  **4. Good case for the security of the local community and environment.**  **a. High proportion of demand for higher education in Iraq.**  **b. High rate of population growth in Iraq.**  **5. The presence of government financial support for official universities**  **6. Similar programs and study areas with those in other universities within and outside of Iraq. 7. Developing good 9. relationships with alumni. Interdisciplinary teaching.** | **1. Competition (local, regional and global).**  **a. Emerging local and regional private colleges.**  **b. Accessibility of international schools via distance education.**  **d. Start the establishment of private universities in neighboring countries and the opening of branches in Iraq.**  **e. Weaknesses in general level of scientific awareness in the community.**  **3. Quality of incoming students (language, analytical thinking, motivation).**  **4. Instability of the country situation (political, security, economic... etc.)** |

**Figure (2.2): SWOT Analysis for the Organizational Structure of Clinical pharmacy Department**

**ChapterThree :**

**The educational goals of the Department of Clinical Pharmacy**

**A – Objectives**

|  |
| --- |
| 1-make the graduated students able be familiar with reading and processing the medical prescription |
| 2- make the graduated students able to communicate with the patients |
| 3- make the graduated students able to educate the patients about their medications |
| 4- make the graduated students able to dispense medications in prescriptions in hospitals and community pharmacy safely |
| 5-Doses specifications by therapeutic drug monitoring |

**B - the goals of teaching and learning**  
1 - work to make a graduate of the Faculty of Pharmacy active ingredient and a product of the society through the application of the goals of the section (a) previously  
2 - Increase student information about drugs and their brand names in in Iraq  
3 - Increase the student information about the harmful effects and the misuse of drugs in the discrepancy between the recipes  
4 - the ability of graduates to exchange prescriptions for the patient safely

C - Consistency with the overall objectives:

Curriculum and laboratory training for students are consistent with and complement the goals of the college and that is clear in (a) and (b) above.

**D- Program Structure**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Code college** | **The department name** | **Code** | **No.** | **stage** | **The course name** | **Code** | **No.** | **Course Title** |
| **1003** | **Clinical Pharmacy** | **Cp** | **04** | **2** | **Communication skill\*** | **Cs** | **18** | **218 CpCs** |
| **1003** | **Clinical Pharmacy** | **Cp** | **04** | **3** | **Pharmacy Ethics\*\*** | **Pe** | **34** | **334 CpPe** |
| **1003** | **Clinical Pharmacy** | **Cp** | **04** | **4** | **Clinical Pharmacy I\*** | **Cp1** | **37** | **437 CpCp1** |
| **1003** | **Clinical Pharmacy** | **Cp** | **04** | **4** | **Clinical Pharmacy II\*** | **Cp2** | **42** | **442 CpCp2** |
| **1003** | **Clinical Pharmacy** | **Cp** | **04** | **5** | **Applied Therapeutics I\*** | **At1** | **47** | **547 CpAt1** |
| **1003** | **Clinical Pharmacy** | **Cp** | **04** | **5** | **Pharmacoeconomic** | **Pm** | **52** | **552 CpPm** |
| **1003** | **Clinical Pharmacy** | **Cp** | **04** | **5** | **Applied Therapeutics II\*** | **At2** | **53** | **553 CpAt2** |
| **1003** | **Clinical Pharmacy** | **Cp** | **04** | **5** | **Therapeutic Drug Monitoring (TDM)\*** | **Td** | **54** | **554 CpTd** |
| **1003** | **Clinical Pharmacy** | **Cp** | **04** | **5** | **Hospital Training** | **Ht** | **56** | **556 CpHt** |

**Methods adopted for the follow-up education programs:**1 - written examinations   
2 - oral exams   
3 - Preparation of reports on scientific topics   
4 - Group discussions

**Chapter Four:**

**The staff and facilities**

**A- The staff:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Faculty Member** | **Highest**  **Degree** | **Rank** | **Position** |
| **Haidar Fakhri Al Tukmagi** | **(PhD)** | **Asst.Prof.** | **Head of the Department** |
| **Fadia yakoob Kadhim Jassim** | **(MSc)** | **Asst.lecturer** | **Teaching staff** |
| **Zena Muzaffar Ahmed Anwar** | **(MSc)** | **Lecturer** | **Teaching staff** |
| **Dhea Jabbar Kadhim** | **(PhD)** | **lecturer** | **Teaching staff** |
| **Ali Latif Jassim Hussein** | **(MSc)** | **lecturer** | **Teaching staff** |
| **Ali Aziz Ali Barak** | **(MSc)** | **Asst. lecturer** | **Teaching staff** |
| **Taqua Abdul Abbas Fadhil** | **(MSc)** | **Asst. lecturer** | **Teaching staff** |
| **Basma Zuhair Mohammed** | **(MSc)** | **Asst. lecturer** | **Teaching staff** |
| **Fadia Thamir Ahmed** | **(MSc)** | **Asst. lecturer** | **Teaching staff** |
| **Ehab Mudher Mikhail** | **(MSc)** | **lecturer** | **Teaching staff** |
| **Samer Imad Mohammed** | **(MSc)** | **lecturer** | **Teaching staff** |
| **Mohammed yaoz** | **Clinical Pharmacy Board** | **lecturer** | **Teaching staff** |
| **Wedad Kadhim** | **B.Sc.** | **Demonstrator** | **Teaching staff** |
| **Abeer Kadhim** | **B.Sc.** | **Demonstrator** | **Teaching staff** |
| **Nasreen Shaaban Mohammed** | **B.Sc.** | **Demonstrator** | **Teaching staff** |
| **Zulfiqar nidal** | **B.Sc.** | **Demonstrator** | **Teaching staff** |
| **Zainab ahmed** | **B.Sc.** | **Demonstrator** | **Teaching staff** |
| **Aya Thaer** | **B.Sc.** | **Demonstrator** | **Teaching staff** |
| **Fatima Zuhair** | **B.Sc.** | **Demonstrator** | **Teaching staff** |
| **Sarah Asaad** | **B.Sc.** | **Demonstrator** | **Teaching staff** |

**B-Keep up with the educational ideas:**

Is the introduction of the assistant lecturers after completing their master's and access to scientific title (teacher assistant ) course s to teaching methods that work on the development of their teaching skills and their ability to deliver the information to the student  
3 - Tools for the definition of new employees and professionals are limited and are not available and rely on individuals to participate with the rest of the veterans and learn from them  
4 - resources education programs are sufficient for the goals set for the department and are developed through the introduction of modern scientific books and rely on studies and research and scientific journals special education curriculum  
5 - There is no support for the institution but the solo effort of teachers to develop and enrich their knowledge of modern information  
6 -facilities and infrastructure is not sufficient to apply all the desired goals

**C - Faculty development**

Include faculty professional development activities : attending seminars and  
Lectures , and participate in workshops , attend professional conferences ,  
Writing professional activities , review activities , and research new and innovative ,  
Training programs inside and outside Iraq .  
  
• leave ( study abroad ) : a program that allows institutional faculty  
Have not completed a Ph.D. degree and be in a tenure or tenure track position for  
Get a chance to study abroad . The Ministry of Education, travel, and  
Monthly salary. Those who are not in the tenure track positions also participate through  
Temporary contracts with the same benefits. Many of the teachers had successfully participated in the program and have been successfully kept in the department.  
  
• Center for Continuing Education Center offers professional development Courses and training for faculty and teaching assistants, graduate recently admit. Each required of faculty members and graduate teaching assistants for the New Year and take at least one of  
Training in the first year of operation.

**Chapter Five:**

**Students, Teaching, Learning and Assessment**

A-STUDENTS

**1- Students Admissions**

An applicant for admission to an undergraduate program of college of pharmacy / BU must satisfy the following minimum requirements:

1. He / She should have an Iraqi secondary school certificate, or its equivalent

2. Acceptance is centrally controlled by the Ministry of Higher Education and Scientific Research.

3. The applicant must submit the required documents within a specified period.

4. An applicant who has graduated from a high school system outside Iraq must have completed twelve years of combined elementary and high school studies from a recognized school. He is also required to provide an equivalency certificate from the Iraqi Ministry of Education.

**2 Evaluating Student Performance**

Student performance in each subject is evaluated by the faculty member, culminating with the assignment of a grade for that subject. The number and types of graded assignments vary according to what is most appropriate for the subject in question. These assignments are generally a combination of examinations, quizzes, homework, and/or laboratory reports. Projects and/or oral presentations are required for some subjects. Certain assignments are graded by a group of the faculty or instructors. For example, at the end of the senior year, the student presents a final written graduation project report. The student also gives an oral presentation of his / her project work, and answer questions on it.

**2.1 Educational Programs / Credit Hour Definition**

The department follows the university wide standard definition of a credit hour. Pharmacy college program has the annual system of study which is followed for all subjects. Excluding the final examination week, one semester credit hour represents one class hour per week with a stipulated duration of 50 minutes. Based on the definition of a 30-week per year, a typical three-credit hour class consists of 90 hours of contact hours.

B - Education programs

**1 – Pharmacy Ethics** : is taught for the second phase number : ( 3211 )  
Level : Class 3, Chapter 2  
Credit hours / weeks : Theory 1 - Objectives:  
  
The course will provide an overview of the ethical issues facing practitioners, pharmacists in order to enable the student to understand the basic concepts of ethics that shape the relationship with the patient's pharmacist , colleges , and other health personnel in order to provide pharmaceutical services to him in good way.  
The session will begin with an introduction to ethics in pharmacy practice and then embark on an in-depth study of specific topics (charity, autonomy, confidentiality, consent .The session will include lectures, case analysis, and classroom discussion.

**2 - Clinical Pharmacy** being taught to the fourth stage (2 hours per course) and the Laboratory of Clinical Pharmacy ( 2 hours )

Objective: To increase public information to students about drugs Almtdaolhhfa Iraq and how to safely discharge.

**3 – Therapeutics** for phase V (2 hours per course) to increase the student's knowledge about the disease and various therapies goals: to increase the student's knowledge about different diseases and medicines used in the treatment and potions and different ways to treat.

**4 – Therapeutic drug monitoring** and laboratory of therapeutic drug monitoring (TDM) Material: 529 .Level : Class 5 : Chapter 2  
Credit hours / week : 2 theory , laboratory 1  
5 – Hospital training to stage five : Training Hospital Number: 5211  
Level: Grade 5 , Chapter 2  
Credit hours : Theory ------- Laboratory 2 hours  
Objectives: To teach students the application of pharmacy practice in hospital wards different ; includes training and follow-up assessment of the situation , and evaluating regimens and errors relating to drug therapy and provide ideas to solve the problems .

**6 - Summer Training** for students in pharmacies National stages III and IV  
Intended to introduce students to the study of the practical application of information and how to deal direct with the patient  
**7 - Economy** : No. 527  
Level: Grade 5 , Chapter 2  
Credit hours / week : Theory 2  
Objectives: The present course will give students a basic understanding of the tools needed to assess the costs and results of medicines and pharmaceutical care services . It will enable participants to assess the quality of life and pharmacoeconomic literature for the purpose of making a rational decision. Students will be exposed to an approach that focuses on drugs to discuss the origins of pharmacoeconomic and quality of life research.  
  
**7 - Communication Skills** for the second phase \_ Course Number: 215  
Level: Class 2, Chapter 2ST  
Credit hours : Theory Laboratory 2 hours - goals : the skill of communication is one of the missions of the practice of pharmaceutical care , and aims to develop the relationship between traditional pharmacist and patient , and that is where the exchange of information , and held in trust and used to improve patient care through drug therapy appropriate . The aim of this course is to the pharmacist to provide better care for patients , and a focus on communication skills needed to build the kind of relationship that lead to improved therapeutic results .

**C- Assessment methods**

* Written examinations
* oral exams
* Preparation of reports on scientific topics
* Group discussions
* Class activities
* Lab. Exam
* mid-term exam
* Final exam

D- Teaching and Learning Methods

* PowerPoints.
* Whit board,
* Simulators
* Guidelines
* Seminars
* Skill lab.

• Lecture/ questions and answer

• Demonstration,

• Small groups assignment

• Procedures

• Power point slide

• Case study

**Chapter Six: the learning outcomes**

A-The desired outcomes  
  
1 - the practice of pharmaceutical care and the development of the traditional relationship between the pharmacist and the patient , and that is where the exchange of information , and held in trust and used to improve patient care through appropriate drug therapy . The aim of this course is to the pharmacist to provide better care for patients , and a focus on communication skills needed to build the kind of relationship that lead to improved therapeutic results .  
2 - give students a basic understanding of the tools needed to assess the costs and results of medicines and pharmaceutical care services . It will enable participants to assess the economy and quality of life of the pharmaceutical literature for the purpose of making a rational decision . Students will be exposed to an approach that focuses on drugs to discuss the economy, the pharmaceutical research and asset quality of life.  
  
3 - Provides an overview of the ethical issues facing practitioners, pharmacists in order to enable the student to understand the basic concepts of ethics that shape the relationship with the patient's pharmacist, colleges, and other health personnel in order to provide pharmaceutical services to him in good way.  
The session will begin with an introduction to ethics in pharmacy practice and then embark on an in-depth study of specific topics ( charity, autonomy , confidentiality, consent  
4 - to teach students the application of pharmacy practice in hospital wards different ; includes training and follow-up assessment of the situation , and evaluating regimens and errors relating to drug therapy and provide ideas for solving problems  
5 - to increase the student's knowledge about the disease and various therapies goals : to increase the student's knowledge about different diseases and medicines used in the treatment and potions and different ways to treat

B-Goals :  
1 - Work to produce graduates capable of dealing with the patient conscious and care in a hospital or private pharmacy  
2 - increase students' ability to read prescriptions and find out the mistakes and work on the disbursement of the patient with all the information for treatment  
3 - Work to increase awareness of the moral at the graduate through his teaching ethics  
4 - working to make a graduate of the Faculty of Pharmacy active ingredient and a product of the society through the implementation of the objectives of the section (a) previously  
5 - Increase student information about drugs and their brand names in circulation in Iraq  
6 - Increase student information about the harmful effects of the misuse of drugs in the discrepancy between the recipes  
7 - the ability of graduates to exchange prescriptions for the patient safely  
**C - Consistency between the objectives and outputs :**curriculum and materials from the school before the branch consistent and complement the goals of the college and as is evident above , but the problem is that time is very short school chorus It is not enough to give sufficient time for the student to accommodate materials and laboratories training

Chapter Seven:

Development and Review of all curricula

A - The curriculum

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|  | **University of Baghdad** |  |
|  | **College of Pharmacy** |  |
|  | **Department of Clinical Pharmacy** |  |
|  | Title of the course: ***Communication Skills***Course number: **215** |  |
|  | Level: 2nd Class, 2st Semester |  |
|  | Credit hours: **Theory 2 hours Laboratory --** |  |
|  | Reference text: |  |
|  | ***1-Robert S. Beardsley, (ed.); Communication Skills in Pharmacy Practice, 5th edition.*** |  |
|  | **Objectives**: Communication skill is one of the missions of pharmacy care practice, aims to develop a conventional relationship between pharmacist and patients, in which information is exchanged, hold in confidence and used to optimize patient care through appropriate drug therapy. This course is intended to pharmacist provide better care to patients, and focus on communication skills necessary to build the kind of relationship that result in improved therapeutic outcomes. |  |
| **No** | **Lecture title** | **hours** |
| 1 | Patient-Centered Communication in Pharmacy Practice | 2 |
| 2 | Principles and Elements of Interpersonal Communication | 2 |
| 3 | Nonverbal type of communication. | 2 |
| 4 | Barriers to communication. | 2 |
| 5 | Listening and empathic responding during communication. | 2 |
| 6 | Assertiveness. | 2 |
| 7 | Interviewing and assessment. | 2 |
| 8 | Helping patients to manage therapeutic regimens. | 2 |
| 9 | Patient counseling; counseling check list; point-by-point discussion; counseling scenario. | 2 |
| 10 | Medication safety and communication skills. | 2 |
| 11 | Strategies to meet specific needs. | 2 |
| 12 | Communicating with children and elderly about medications. | 2 |
| 13 | Communication skills and inter-professional collaboration. | 2 |
| 14 | Electronic communication in healthcare. | 2 |
| 15 | Ethical behavior when communicating with patients. | 2 |

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|  | **University of Baghdad** |  |
|  | **College of Pharmacy** |  |
|  | **Department of Clinical Pharmacy** |  |
|  | Title of the course: ***Medical ethics***Course number: **(3211)** |  |
|  | Level: 3rd Class, 2nd Semester |  |
|  | Credit hour/weeks: **Theory 1** |  |
|  | Reference text: |  |
|  | **1***-Robert J. Cipolle, Linda M. Strand, Peter C. Morley.****Pharmaceutical Care Practice: The Clinician's Guide,*** *2nd Edition****.*** |  |
|  | **2*-*** *Robert m. Veatch and Amy Haddad****. Case Studies in Pharmacy Ethics.*** *second edition. Copyright © 2008 by Oxford University Press, Inc.* |  |
|  | **Objectives**: |  |
|  |  |  |
|  | The course will provides an overview of ethical issues facing practicing pharmacists in order to enable the student to understand the basic concepts of ethics which formulate the relationship of pharmacist with the patient, colleges, and other health personnel in order to deliver his pharmaceutical services in good way. |  |
|  | The course will begin with an introduction to ethics in pharmaceutical practice and then proceed to examine in depth specific topics (Beneficence, Autonomy, Confidentiality, Consent…). |  |
|  | The course will include lectures, case analysis, and classroom discussion. |  |
|  |  |  |
| **No** | **Lecture title** | **hours** |
| 1 | Introduction to Pharmacy Ethics (Theoretical considerations). | 2 |
| 2 | Code of Ethics for Pharmacists. | 1 |
| 3 | Common Ethical Considerations in Pharmaceutical Care Practice (Beneficence, Autonomy, Honesty, Informed Consent, Confidentiality, Fidelity ………). | 3 |
| 4 | Interprofessional Relations. | 2 |
| 5 | Making ethical decisions. | 1 |
| 6 | Ethical issues related to clinical pharmacy research. | 1 |
| 7 | Ethical problems in the pharmacist’s clinical practice. | 1 |
| 8 | Preventing misuse of medicines. | 1 |
| 9 | Case studies in pharmacy ethics. | 3 |
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|  | **University of Baghdad** |  |
|  | **College of Pharmacy** |  |
|  | **Department of Clinical Pharmacy** |  |
|  | Title of the course**: Clinical Pharmacy I** |  |
|  | Level: 4th Class, 1st Semester |  |
|  | Credit hours/week : Theory 2 lab:- 1 |  |
|  | Reference Text: ALISON BLENKINSOPP, PAUL PAXTON(eds), Symptoms in the Pharmacy. A Guide to the Management of Common Illness, 6th edition. |  |
|  | Lorwaterfield, Community Pharmacy Hand Book, 5th edition |  |
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| **No** | **Lecture title** | **hours** |
| 1 | Introduction to community pharmacy. | 1 |
| 2 | Respiratory problems: Cough, Common cold, allergic rhinitis, Otitis media, Laryngitis & Pharyngitis | 3 |
| 3 | G.I.T problemse: Diarrhea, Constipation, Heart burn and indigestion, IBS and Hemorrhoids | 4 |
| 4 | Pediatric care practice : Oral thrush, pinworms and head lice | 2 |
| 5 | Skin conditions: Acne, Scabies, Psoriasis, Hair loss, Fungal infection, Eczema and Dermatitis , Dandruff, Cold sore, Corns and Callus. 5 | 5 |
| 6 | Women’s health care: Cystitis and vaginal thrush, primary dysmenorrhea and Premenstrual syndrome. | 2 |
| 7 | CNS related problems: Headache, Insomnia, Motion sickness, Nausea and vomiting | 3 |
| 8 | - Eye problems | 1 |
| 9 | ENT problems | 1 |
| 10 | Oral hygiene, mouth ulcer | 1 |
| 11 | Obesity and body weight control. | 1 |
| 12 | - Pain and musculoskeletal disorders | 1 |
| 13 | Nicotine replacement therapy ( NRT). | 1 |
| 14 | Dietary supplements | 1 |
| 15 | An update in reclassification of OTC drugs ( simvastatin, Tamusotisin& azithromycin). | 2 |
| 16 | Medication adherence and errors. | 1 |

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|  | **University of Baghdad College of Pharmacy** |  |
|  | **Department of Clinical Pharmacy** |  |
|  | Title of the course**: Clinical Pharmacy I** |  |
|  | Level: 4th Class, 1st Semester |  |
|  | Credit hours/week : 1 |  |
|  |  |  |
| **No.** | **PracticeTitle** | **Hours/week** |
| 1 | Communication with patients. | 2 |
| 2 | Respiratory system in practice (part I): Cough. | 2 |
| 3 | Respiratory system in practice (part II): Common cold. | 2 |
| 4 | G.I.T system in practice (part I): Constipation. | 2 |
| 5 | G.I.T system in practice (part II): Diarrhea and IBS. | 2 |
| 6 | GIT system in practice (part III): GERD& indigestion. | 2 |
| 7 | Skin conditions in practice (part I): Hair loss; cold sore and athlete's foot. | 2 |
| 8 | Skin conditions in practice (part II): Dandruff, Eczema and mouth ulcer. | 2 |
| 9 | Skin conditions in practice (part III): warts and scabies. | 2 |
| 10 | Pediatrics in practice: Oral thrush; colic; pinworm and napkin rash. | 2 |
| 11 | Minor eye disorders in practice. | 2 |
| 12 | CNS system: Insomnia, motion sickness, obesity and nicotine replacement therapy (NRT). | 2 |
| 13 | Drug Information sources for pharmacist. | 2 |
| 14 | An update in reclassification of OTC drugs. | 2 |
| 15 | Collective practice. | 2 |

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|  | **University of Baghdad** |  |
|  | **College of Pharmacy** |  |
|  | **Department of Clinical Pharmacy** |  |
|  | Title of the course**: Clinical Pharmacy II** |  |
|  | Level: 4th Class, 2nd Semester Credit hours/week : Theory 2 hours Lab 1 |  |
|  | Reference Text: Roger Walker, Clive Edwards, Clinical Pharmacy & Therapeutics |  |
| **No** | **Lecture title** | **hours** |
| 1 | Introduction to the concept of clinical pharmacy- its activities and professional responsibilities.( including current state of clinical pharmacy in Iraq) . | **1** |
| 2 | an overview of pharmaceutical care practice (the patient care process). | **1** |
| 3 | Hematologic disorders: Anemia and sickle cell disease. | **2** |
| 4 | Hypertension. | **2** |
| 5 | Ischemic heart diseases | **2** |
| 6 | Heart failure. | **2** |
| 7 | Peripheral vascular diseases. | **1** |
| 8 | - Asthma. | **2** |
| 9 | Chronic obstructive pulmonary disease ( COPD ). | **1** |
| 10 | Diabetes mellitus & Diabetic ketoacidosis (DKA) . | **2** |
| 11 | Peptic ulcer disease. | **2** |
| 12 | Tuberculosis | **1** |
| 13 | Infective meningitis | **1** |
| 14 | Respiratory tract infections | **2** |
| 15 | GIT infections | **1** |
| 16 | Gout and hyperuricemia | **1** |
| 17 | Rheumatoid arthritis (RA) and osteoarthritis (OA) | **2** |
| 18 | Osteoporosis and other metabolic bone disease. | **1** |
| 19 | Infectious Endocarditis | **1** |
| 20 | Surgical antibiotic prophylaxis | **1** |
| 21 | Urinary tract infection (UTI) | **1** |

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| **University of Baghdad** | |  |
| **college of Pharmacy** |  |  |
| **Department of Clinical Pharmacy** | |  |
| Title of the course**: clinical Pharmacy II** | |  |
| Level: 4th Class, second Semester | |  |
| Credit hours/week : 1 | |  |
|  |  |  |
| **No** | **practice** | **Week/hours** |
| 1 | Communication with physician and patient counseling. | 2 |
| 2 | Drugs for anemia and related disorders. | 2 |
| 3 | Cardiovascular drugs in practice part I: diuretics, β\_ blockers, ACE- inhibitors and Ag II receptor blockers. | 2 |
| 4 | Cardiovascular drugs in practice part II: nitrates, Ca2+-channel blockers, α-blockers, and anti-hyperlipidemic drugs. | 2 |
| 5 | Drugs for asthma and COPD in practice. | 2 |
| 6 | Antimicrobial drugsin practice part I: β-lactam antibiotics, tetracyclines and aminoglycosides. | 2 |
| 7 | Antimicrobial drugs in practice part II: macrolides, sulphonamides, quinolones, and other miscellaneous antibiotics. | 2 |
| 8 | Antimicrobial drugs in practice part III: antivirals and antifungals. | 2 |
| 9 | Drugs for endocrine system part I (Diabetes Mellitus). | 2 |
| 10 | Drugs for endocrine system part II: thyroid disorders, corticosteroids, and hormones used in gynecological disorders. | 2 |
| 11 | Drugs acting on CNS (antimigraine drugs, analgesics and antiemetics) and musculoskeletal disorders (NSAIDS and bisphosphonates). | 2 |
| 12 | Drugs for GI disorders: peptic ulcer disease and inflammatory bowel disorders. | 2 |
| 13 | Drugs for ENT and skin disorders. | 2 |
| 14 | Contraception. | 2 |
| 15 | Collective practice. | 2 |

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|  | **University of Baghdad** |  |
|  | **College of Pharmacy** |  |
|  | **Department of Clinical Pharmacy** |  |
|  | Title of the course**: Therapeutics I** |  |
|  | Level: 5th Class, 1st Semester |  |
|  | Credit hours: Theory 3 hours |  |
|  | Reference Text: Roger Walker, Clive Edwards Clinical Pharmacy & Therapeutics.2016 |  |
|  | Barbara G.Wells& Joseph T. Diriro, Pharmacotherapy hand book 9thEdittion. |  |
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| **No** | **Lecture title** | **hours** |
| 1 | Interpretation of Lab. data. | 2 |
| 2 | Acute coronary syndrome. | 2 |
| 3 | Arrhythmias | 2 |
| 4 | Thrombosis | 2 |
| 5 | Dyslipidemia | 1 |
| 6 | Stroke | 2 |
| 7 | Shock | 2 |
| 8 | Liver cirrhosis | 2 |
| 9 | Viral hepatitis | 1 |
| 10 | Inflammatory bowel diseases | 2 |
| 11 | Acute renal failure (ARF) | 1 |
| 12 | Chronic renal failure (CRF) | 2 |
| 13 | Hemodialysis and peritoneal dialysis | 1 |
| 14 | Systemic lupus erythematosis (SLE) | 1 |
| 15 | Benign prostatic hyperplasia (BPH) | 1 |
| 16 | Acid – base disorders | 2 |
| 17 | Disorders of fluid and electrolytes | 2 |
| 18 | Urinary incontinence and pediatric enuresis | 1 |
| 19 | Epilepsy and status epilepticus | 2 |
| 20 | multiple sclerosis | 1 |
| 21 | Parkinson's disease | 2 |
| 22 | Pain management | 2 |
| 23 | Headache disorders | 2 |
| 24 | glucoma | 1 |
| 25 | Parenteral nutrition | 2 |
| 26 | Enteral nutrition | 2 |
| 27 | Pharmacovigilance | 2 |

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|  | **University of Baghdad** |  |
|  | **College of Pharmacy** |  |
|  | **Department of Clinical Pharmacy** |  |
|  | Title of the course**: Therapeutics II** |  |
|  | Level: 5th Class, 2nd Semester Credit hours/week : Theory 2 |  |
|  | Reference Text: Roger Walker, Clive Edwards (eds), Clinical Pharmacy & Therapeutics.2012 |  |
|  | Barbara G.Wells& Joseph T. Diriro, Pharmacotherapy hand book 7thEdittion |  |
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| **No** | **Lecture title** | **hours** |
| 1 | Thyroid and parathyroid disorders | 2 |
| 2 | Contraception | 1 |
| 3 | Endometriosis | 1 |
| 4 | Menstruation related disorders | 1 |
| 5 | Hormonal replacement therapy (HRT) | 2 |
| 6 | Cancer treatment and chemotherapy | 2 |
| 7 | Leukemias | 2 |
| 8 | Lymphomas and Multiple myeloma | 2 |
| 9 | Breast and prostate cancers | 2 |
| 10 | Adverse effects of chemotherapy | 1 |
| 11 | Human immunodeficiency viruse | 2 |
| 12 | Adrenal gland disorders | 1 |
| 13 | Pituitary gland disorders | 1 |
| 14 | Alzheimer's disease | 1 |
| 15 | Schizophrenia | 2 |
| 16 | Depressive disorders | 2 |
| 17 | Anxiety disorders | 1 |
| 18 | Sleep disorders | 1 |
| 19 | Bipolar disorders | 2 |
| 20 | colorectal cancer | 1 |

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| **University of Baghdad** |  |
| **College of Pharmacy** |  |
| **Department of Clinical Pharmacy** |  |
| Title of the course: Hospital Training Course number: 5211 |  |
| Level: 5th Class, 2nd Semester |  |
| Credit hours: Theory ------- Laboratory 2 hour |  |
| Tutors: Departmental Committee for Hospital Training |  |
| Reference text: Manuals for Clinical Training Adopted by the Department. |  |
| Objectives: To teach students the application of pharmacy practice in different hospital wards; it includes training on case evaluation and follow up, evaluation of therapeutic regimens and registration of errors related to drug therapy and presenting ideas to solve problems. |  |
| **Lecture title** | **hours** |
| Clinical Pharmacy Practice in Internal Medicine: Clinical observation of cases; evaluation of the case sheets; case presentation; discussion and evaluation. | 10 |
| Clinical Pharmacy Practice in Surgery wards: Clinical observation of cases; evaluation of the case sheets; case presentation; discussion and evaluation. | 5 |
| Clinical Pharmacy Practice in Gynecology and Obstetrics Ward: Clinical observation of cases; evaluation of the case sheets; case presentation; discussion and evaluation. | 5 |
| Clinical Pharmacy Practice in Pediatric Ward: Neurology , Cardiology , GIT , Birth defects , Sepesis , Meningitis | 10 |

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|  | **University of Baghdad** |  |
|  | **College of Pharmacy** |  |
|  | **Department of Clinical Pharmacy** |  |
|  | Title of the course: ***Pharmacoeconomic*** Course number: **527** |  |
|  | Level: 5th Class, 2nd Semester |  |
|  | Credit hours/week: **Theory 2** |  |
|  | Main ReffernceText : Drummond MF , O'Brien GL , Torrance GW . Methods for economics evaluation of health of health care programs 3rd ed. Oxford , Oxford university press |  |
|  | Reference text: ***Bootman JL, Townsend RJ, McGhan WF, (Eds.), Principles of Pharmacoeconomics, 2nd ed., Harvey Whitney Books Company, Cincinnati, Oh, latest edition*** |  |
|  |  |  |
|  | **Objectives**: The present course will give students the basic understanding of the tools needed to assess the costs and outcomes of medications and pharmaceutical care services. It will enable participants to evaluate the pharmacoeconomic and quality of life literature for the purpose of rational decision-making. Students will be exposed to the drug-focused approaches to pharmacoeconomic research and the fundamentals of quality of life research. |  |
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| **No** | **Lecture title** | **hours** |
| 1 | Course overview and basic principle of pharmacoeconomics | 2 |
| 2 | Cost analysis | 6 |
| 3 | Cost effectiveness analysis (CEA) | 2 |
| 4 | 1st mid-term examination. | 2 |
| 5 | Cost Utility analysis ( CUA ) | 2 |
| 6 | Cost Benifit analysis ( CBA ) | 2 |
| 7 | Critical assessment of economic evaluation | 4 |
| 8 | 2nd mid-term examination. | 2 |
| 9 | Drug-focused versus disease-focused frame work for conducting pharmacoeconomic analyses. | 2 |
| 10 | Introduction to epidemiology | 2 |
| 11 | Project presentation. | 2 |
| 12 | Project presentation. | 2 |

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|  | **University of Baghdad** |  |
|  | **College of Pharmacy** |  |
|  | **Department of Clinical Pharmacy** |  |
|  | **Title of the course: Therapeutic Drug Monitoring (TDM) Course number: 529** |  |
|  | **Level: 5th Class: 2nd Semester** |  |
|  | **Credit hours/week: Theory 2 , Laboratory 1** |  |
|  | **Reference Texts:** |  |
|  | **AppliedClinicalPharmacokinetics**, Second Edition, 2014 by Larry A. Bauer. |  |
|  | Additional references include but not limited to the following: |  |
|  | **Clinical Pharmacokinetics Concepts and Applications**, |  |
|  |  |  |
| **No** | **Lecture title** | **hours** |
| 1 | **Review of basic pharmacokinatics ( PK ) and pharmacodynamics ( PD )** | 2 |
| 2 | **Clinical PK eqautions and calculations** | 3 |
| 3 | **clinical PK in special population and cases** | 3 |
| 4 | **clinical PK / PD for aninoglycoside AG** | 2 |
| 5 | **clinical PK / PD for Vancomycin** | 2 |
| 6 | **clinical PK / PD for Digoxin** | 2 |
| 7 | **clinical PK / PD for Phenytoin** | 3 |
| 8 | **clinical PK / PD for other anticonvulsants ( Eg. Carbamazepine , valproic acid , phenobarbiton / primidone , Ethosuximide )** | 3 |
| 9 | **clinical PK / PD for theophylline** | 2 |
| 10 | **clinical PK / PD for Immunosuppresants ( Eg. Cyclosporine , Tacrolimus )** | 2 |
| 11 | **clinical PK / PD for Other cardiovascular agents ( Eg. Lidocaine , Procaineamide / N-acetyle Procainamide )** | 2 |
| 12 | **clinical PK / PD for Other drugs ( Eg. Lithium , Anticancer agents and anticoagulants )** | 4 |

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|  | **University of Baghdad** |  |
|  | **College of Pharmacy** |  |
|  | **Department of Clinical Pharmacy** |  |
|  | **Title of the course: Therapeutic Drug Monitoring (TDM) Lab Course number: 529** |  |
|  | **Level: 5th Class: 2nd Semester** |  |
|  | **Credit hours/week: 1** |  |
|  | **Reference Texts:** |  |
|  | **AppliedClinicalPharmacokinetics**, Second Edition, 2014 by Larry A. Bauer. |  |
|  | Additional references include but not limited to the following: |  |
|  | **Clinical Pharmacokinetics Concepts and Applications**, |  |
| **No.** | **Lecture title** | **hours** |
| 1 | **TDM practice in hospital ( Overview of the process of requesting serum level monitoring , TDM request form , TDM lab. Facilities and instruments , TDM team and their own responsibilities )** | 2 |
| 2 | **Problems in basic Pharmacokinatics and pharmacodynamic (PD)** | 2 |
| 3 | **Clinical PK equations and calculations** | 2 |
| 4 | **Clinical PK in special population and cases** | 2 |
| 5 | **Problems in Clinical PK for Aminoglycosides** | 2 |
| 6 | **Problems in Clinical PK for Vancomycin** | 2 |
| 7 | **Problems in Clinical PK for Digoxine** | 2 |
| 8 | **Problems in Clinical PK for Phenytoin** | 3 |
| 9 | **Problems in Clinical PK/PD for Anticonvulsants  (e.g., Carbamazepine, Valproic Acid, Phenobarbitone/Primidone, Ethosuxsimide)** | 3 |
| 10 | **Problems in Clinical PK/PD for theophylline** | 2 |
| 11 | **Problems in Clinical PK/PD for Immunossprasants (e.g., Cyclosporine, Tacrolimus)** | 2 |
|
| 12 | **Problems in Clinical PK/PD for Cardiovascular agents ( Lidocaine , Procainamide , N-acetyl Procainamide)** | 2 |
|
| 13 | **Clinical PK/PD of other drugs (e.g., Lithium, Anticancer agents, Anticoagulats )** | 4 |
|

**B - Evaluation of the curriculum:**

The curriculum is evaluated by the Scientific Committee competent faculty and the choice of materials, lectures and scientific resources for the development of a modern the curriculum annually and added modern information and delete the information that Ngiller with time

**C - Evidence of the success of the approach**

the scientific level of the outstanding students of the Faculty of Pharmacy, University of Baghdad, compared with the rest of the colleges give an indication ofthe success of the approach

**D - Curriculum Development**:

The development by the Scientific Committee for each branch and included professors Article competence and commensurate with the scientific progress and the modern pharmaceutical research

**E-SWOT Analysis**

Figure (7.1) shows the SWOT analysis for the curriculum of the department

|  |  |  |
| --- | --- | --- |
| STRENGTHS(INTERNAL) | |  | | --- | | WEAKNESSES(INTERNAL) | |
| |  | | --- | | 1. Designed to meet both local needs and international standards.  2. Strong pharmaceutical science components.  3. Availability of a good variety of general education subjects.  4. A well-structured laboratory experience.  5. A strong professional component.  6. Acceptable equipped laboratory, library and IT Facilities. | | 1-Central control of curriculum development by the sectorial committee in the ministry, and the possibility of changes in the curriculum only in a limited rate.  2-Lack of attention to give courses in English, especially in the scientific discussion within the classroom.  3-The style of the given curriculum tends to make the student recipients and not learner.  4-Lack of allocation enough credit hours to acquire good skills in hospital training programs that needed for the pharmacist  5- Lack concentration of curriculum to teach students to work in team. |
| OPPORTINITIES (EXTERNAL) | THREATS (EXTERNAL) |
| 1-Emerging technologies.  a. Technologies that does not require extensive industrial infrastructure.  b. Information based technologies.  3-. New trends in multi-disciplinary professional education and new teaching methods.  a. Possibility of re-designing curriculum and by-laws to allow multi-disciplinary teaching and learning.  b. Possibility of utilizing e-learning and distance education. | Quality of incoming students (language, analytical thinking, motivation). |

Chapter 8   
Research  
1 - permanent development plan for scientific research in the branch of clinical pharmacology and linking them to see the needs of the college and the community  
- By  
Directing the internal and external missions to serve the vision of the college  
Motivate young researchers to actively participate in research projects  
Scientific conference of the branch and the College at the end of the school year to show what has been accomplished in the plan and implementation of research projects in the master's and doctoral degrees and give opportunities for students to view the problems that hinder research and documenting it on the boards of sections  
Indispensability to submit a report to the faculty dean for research that have been published in magazines, local and global at the end of each academic year by the departments and work bulletin summaries of published research .  
2 - the active participation of the scientific research in the areas of pharmacy service  
- By  
Directing scientific research to serve the patient in clinical research  
Clinical studies linking problems to scientific research and try to find solutions.  
Find the college guide points to the Applied Research .  
  
   
  
**Graduate**To get to the formulation and implementation plan for higher studies and scientific research and other scientific activities in the light of the vision and mission of the college with the requirements of the development of the surrounding community at the top considerations , the Branch has developed the following policies for Graduate Studies and Research :  
• Develop a plan public research branch to promote scientific research activities altogether depend on the actual needs of the surrounding community and keep pace with the most important scientific developments the world , and urged the scientific departments to adopt the five-year plans commensurate with the general plan of the college and a commitment to implement and update the research plan for the scientific departments every three years . The plan to link research faculty research plan for the university and the university linked to the goals and development plans and the needs of the community, and the needs of the college of new disciplines . Also included the distance from the duplication and redundancy and benefit from previous studies .  
• permanent development plan for scientific research and linking the college to see the college and the needs of Alambtma by :  
o Bathat directing internal and external service Rwbp message and the college and university .  
o motivate young researchers to actively participate in Alparwaat research .  
o hold a scientific conference of the department and the college to view what has been achieved in the implementation plan and research projects in the master's and doctoral degrees and give opportunities for students to view the problems that hinder research and documenting it in the District Councils .  
o development and continuous updating of research labs and providing services that serve the modern scientific research process and maximize the use of researchers and training them.  
• Improve the quality of scientific research and encourage outstanding scientific publishing and encourage faculty members to publication in scientific journals of international court with high impact transactions . This includes the provision of sources see the latest scientific developments through the activation and update the library paper and digital . And the provision of modern means of communication and the latest versions of scientific sessions , books and others. In addition to working on the transfer and settlement of modern technology and participate in the development and adaptation to suit local conditions for development purposes .  
• encourage faculty members and assistants Ali : -  
o participate in scientific conferences, regional and international , and to provide technical and financial support necessary for them.  
o attend seminars that contribute in identifying the needs of the labor market and the problems they are facing and work to resolve them through research projects . And guide researchers toward scientific research in the most effective community service .  
o participate in the training courses and workshops on scientific research . Providing researchers and writing skills and the principles of sound scientific research and training on the use of various scientific instruments .  
o conduct scientific research, innovation , and the creation of tools and research facilities for them , especially full-time sabbatical them scientifically , and enable them to conduct their research in an appropriate scientific atmosphere .  
• cooperation with other bodies and scientific and research institutions within and outside Iraq by conducting research and exchange of knowledge and expertise. And encourage partnership in scientific research between different disciplines or debate. And coordination of work between agents colleges for higher studies at the university , and to eliminate duplication of work in performance , and to promote joint research between departments and colleges to raise the efficiency and effectiveness of the use of the material available .  
• Build a database covering all scientific research and research and researchers and Theses published by faculty members and their assistants , researchers, and allow Tllk information for all to benefit. Create an information base for ongoing research and ended at the university , research and exchange of information with universities and other research centers . As well as the work of indispensability Tafrar annual research Althe then published in the local or global patrols by the scientific departments and work Bml\_khasat research bulletin published .  
• Publication Ethics of Scientific Research .  
• Integration with the policies of the college in the field of education and the areas of community service and development environment.  
- Upgrading of graduate studies and developed to enable them to contribute effectively in promoting the efficiency of the educational process for the post- bachelor .  
- Improve the quality of graduates and postgraduate qualification in order to achieve a high degree of efficiency to the level of foreign to them.  
- Development of methods and goals of graduate studies and research and scientific messages in the service of science and the educational process and serve the community by :  
1 - Review and develop regulations for the upper stage Aldraselt to be a system of credit hours .  
2 - Review and development of graduate programs current .  
3 - Preparation of graduate programs Mmtmizh consistent with the distinctive features of the college .  
- Increase the number enrolled in graduate programs for college graduates and other colleges and expatriates   
  
**Research plan for college**Objectives of the plan (Objectives): -  
1 - raise the level of scientific research and its applications with a direct return on development plans and community service  
2 - increase efficiency and academic and research career faculty member  
3 - raising the efficiency of a faculty member of the scientific competition between noble fellow faculty.  
4 - cooperation and integration of the various academic departments within the college and beyond.  
5 - To encourage the faculty member to publish scientific research inside and outside Iraq .  
6 - directing scientific research disciplines applied .  
7 - Joined encourage graduates to graduate college and other colleges and arrivals .  
  
Policies (policies): -  
1 - innovation and creativity in scientific research .  
2 - Dissemination of scientific research in journals and international scientific journals and is the effect of high (Impact Factor)  
3 - Scientific Assessment of a faculty member for the overall scientific and research activity by the scientific committees of the Standing upgrade for positions of professors and assistant professors .  
4 - permanent connection between the research plans for all sections of society and benefit from them.  
5 - constant search for sources of funding for research from outside the university .  
Operational procedures (Action plan): -  
1 - open the door of progress graduate from both inside and outside the college  
2 - Advertising annually on the open door of the recording and study of all departments of the college diploma , master's and doctorate from inside and outside the college for those who meet the conditions set out in the list of Graduate Studies .  
3 - competition and arbitration Theses all sections publicly in the presence of judges from outside the department stated  
4 - cooperation and participation of university hospitals to train researchers and collect medical data and clinical researcher needed  
  
Indicators of Success (Indicators): -  
1 - recordings of the annual Master 's and doctoral degrees .  
2 - discussion and arbitration Theses .  
3 - Snoíaakther deployment of 10 foreign research journals with high impact factor .  
4 - participate in international conferences  
5 - Seminar sessions , which are held periodically .  
Research topics : - (Research items): -  
First: The research topics include faculty research master's and doctoral assistantships and teaching assistants in addition to the research carried out by members of the faculty of teachers and teaching assistants and professors in various departments of the college by specialization assigned to it in addition to the cooperation of the nine departments in the development of a scientific plan .  
- Coordination and cooperation between the academic departments to develop an integrated plan aimed to find solutions to health problems and face the threat of global pandemics , which contributes to the process of economic development .  
- Afd partnership agreements with the scientific and research in Iraq

**Chapter 9**

Support:  
The branch and on an ongoing basis and periodically the implementation of a number of projects, scientific support for students and graduates and researchers from within the training sessions and the preparation of plans for continuing to train and , despite the multiplicity of forms of training , but the stages of the training process pursing a system similar and effort planned and organized in successive stages represents the loop picket complement each other and affect and are affected by .  
These stages may be fully college if they have the potential of in-house training , or training with foreign entities , or cooperation between these agencies and facilities at some point or more .  
The phases are as follows:  
1 . Identify training needs :  
The process of identifying the training needs of the first step and the core from which the training process and affect all subsequent stages where it was found training objectives and target group it helps to good planning for training programs , and determine the training needs of the difference between current performance and the performance of the target , and is defined as a set of changes required place in the individual and relating to his input and experience , performance and behavior and trends to make it fit for the performance of functions of the position held by or candidate to be filled , and based on these needs are identified the purpose of the training according to the requirements of the performance of the functions and aspirations of the branch clinical Pharmacology toward improving performance and treat the problems of the existing work , and the face of the expansion of the activities or the creation of new jobs or hire new employees , and other targets , and the enterprises that want to inflict their staff training training needs , also holds training bodies assemble these requirements , classification and design training programs to build them.  
And requires the success of this stage to identify these needs accurately so as to be responsive for the purpose for which the light of the principles and objective indicators , including: indicators of organizational performance of the college and the results of the analysis of the organizational structure, job descriptions and performance indicators of faculty members and their assistants , and indicators of career planning .  
  
2 . Put a training plan :  
The concerned party in the college develop training plan, a comprehensive training needs and faculty members and their assistants , as well as staff and students the required training , based on the availability of adequate information on the objectives of the branch and its settings, and individuals required training , and training programs available points of implementation and funds for training and the time frame for implementation.  
  
3 . Designing training :  
And include identifying training content based on the training needs and put them in training programs , and determine the training methods that will be out of training , and to identify the types , levels and disciplines of the trainers , and the development of schedules for training programs and appropriate places for its implementation , and identify the training budget , and deviate from the foundations of evaluating these programs .  
And undertake the implementation of this stage those who are training and requires successful that the contents of the training programs are compatible with the objectives and training needs , with a variety of training methods including commensurate with the levels of the trainees and their needs and facilitate the transfer of information , ideas, and practical applications for them , and that accurately identifies training aids that are compatible with the contents of the training programs .  
  
4 . The implementation of the training :  
This is where the announcement of the program and causing the candidates out and notified Bmeidha and create places and training aids , then hold programs in the presence of trainees her attendance in, and then make questionnaires necessary at the end of each training program , and must take into account the logical sequence of the topics the program and the extent of the interaction of trainees with good transfer of information and applications to them by the coaches and the adequacy of training methods to deliver information , applications, and appropriateness of time spent in training .