University: Al Azhar
Faculty: Medicine
Department: Clinical Pharmacology

Program Specification

Year: 2013/2014

A- Basic information:

1. Program title: Clinical pharmacology Master degree
2. Nature of the program: Single program
3. Department responsible for the program: Clinical pharmacology

B- Specialized information:

1. General objective of the program:

The aim of this course is to enable the Masters candidates to:

1) Understand Principals of Clinical Pharmacology:
2) Follow the rapidly changing and inflating details about Clinical Pharmacology and therapeutics.
3) Integrate Clinical Pharmacology data with the ongoing basic medical sciences and clinical applications.
4) Develop the scientific research skills as well as effective communication and team work attitudes.

2. Intended Learning Outcomes from the program:

A. Knowledge and understanding:

I- Clinical Pharmacokinetics: At the end of the course the students should know:

1- Drug forms and suitability in different conditions.
2- Proper choice of rout of administration.
3- Drug absorption, distribution, metabolism (biotransformation and elimination).
4- Half-life application to clinical situations.
5- pKa and drug interaction absorption and excretion.
6- Bioavailability: factors affecting, target concentration and dosing, methods of dose calculation.

II- Clinical Pharmacodynamics. At the end of the course the students should know:

7- Mechanisms of drug action.
8- Receptors, ligand agonist, antagonist…
9- Drug-receptor interactions.
10- Binding effect-relation and theories.
11- Concentration-binding curve and dose response relation (potency, efficacy, safety)
12- Variations in drug responsiveness.
13- Understanding the scientific basis for how and why to measure plasma drug concentration, indications of target-concentration strategy.

14- Recognize the mechanisms of action of therapeutic drugs commonly taken accidentally or deliberately in overdose and strategies for management.
15-Translation of the Pharmacological effect of a drug into therapeutic effect during short -term drug therapy.
16- know how drug action can be modified.
17- Describe the Therapeutic effects and adverse effects can be mediated via different pharmacological effect, and The relationship between the pharmacological effects of a drug and the rate of onset or duration of its action.
18- Recognize Drug disease interaction and Describe the Therapeutic effect through adaptation.
19- Explain Tolerance; increase ineffectiveness of a drug and Withdrawal syndromes.
20- Recognize the Adverse effect directly due to adaptation.
21-Describe Pharmacological actions are either wanted (therapeutic action and uses) or unwanted (side effects and toxicity)
22-Irrational use of medicine is a major threat to health and economic waste
23-Over treatment, inadequate treatment, self-medication problems. Drug resistance and inappropriate prescription
24- Making the right decision. Appropriate prescription needs proper diagnosis, considering the patient problems (age, sex, pathological problems…) and economic state
25- Improvement of health systems through advocacy and educational programs for health providers, prescribers, consumers and advices to policy makers. Controlling and limiting medicines options for the public health and priority concerns.

B. Intellectual Skills:

1- Negotiate an acceptable regimen with the patient where appropriate.
2- Access information effectively about drug actions
3- Develop skill to balance the risk- benefit effects of a drug and dose determination.
4- Prepared to make decision to use a drug having serious side effects.
5- Develop prescribing policies concerning the relationship between the therapeutic effect and adverse effects and the pharmacological effect in relation to onset and duration of action.
6- Recognize the importance of being extremely cautious about subject safety.
7- Recognise time-course effect that increase drug effectiveness, or increase ineffectiveness.
8- Recognise the hazard of adverse effect due to adaptation and withdrawal syndromes.
9- Develop prescribing skills through discussing clinical scenarios and problem solving.
10- Describe the Pathophysiology and treatment of selected clinical cases.
11- - Select drugs and dose regimens rationally based on individual factors.
12- - Develop prescribing policies, formularies and guidelines.
13- - Evaluate guidelines on medicines utilization in the context of D&T committees.
14- - Write guidelines on medicines management for evaluation by drug and therapeutics (D&T) committees.
15- - Make effective submissions to formulary committees for new drugs.
16- - Audit drug utilization.

3. Skills:

C. Professional and Practical Skills:

At the end of the course the students should able to:

1- Construct and adjust dose regimens correctly.
2- Apply the information of drug potency, efficacy and safety to drug therapy.
3- Be aware of variation in drug responsiveness.
4- Possess skills in managing unexpected drug effects.
5- Recognize the mechanisms of action of important poisons and management of poisoned patient: precautions.
6- Measure plasma drug concentration, determine Target-Concentration (TC), and use it to calculate individual doses.
7- Gain the skill to manage drug overdoses.
8- Develop diagnostic skill relevant to the epidemiological context of chemical poisoning.
9- Maintain up to date qualifications in resuscitation skills.
10- Demonstrate methods of modifying drug actions.
11- Demonstrate effectively drug disease interaction.
12- - Follow logic scheme that leads to proper choice of drug therapy and leading to better understanding of rational use of dug.

D. General Skills:

At the end of the course the students should able to:

1- Recognize the importance of taking responsibility for repeated observation and ongoing patient follow-up.
2- Recognize the importance of follow-up during clinical investigation.
3- Respect patient/ subject autonomy.
4-Recognize the importance of concordance.
6-Be alert to the possibility of unexpected drug effects.
7- Be aware of the value of plasma drug concentration, (TC), and use it to calculate individual doses when needed.
8- Prepares cautiously in the face of possible hazards of overdoses and toxicity.
9-Be able to manage chemical poisoning.
10-Be aware of time course effect and its application I medical therapy.
11-Possess skills in managing the hazard of adverse effect due to adaptation and withdrawal syndromes.
12-Communicate effectively with colleges.

4. Academic standards of the program:

5. References “benchmark” –Academic standard reference of the NAQAAE

6. Structure and content of the program: 1st part and 2nd part
   A- Time duration of the program: 2 years
   B- Structure of the program:

C- Courses of the program:

Code number	Course Title	Number of units	Number of hours /Week			Study Year
			Lectures	Practical/ Clinical	Others such as tutorials	
1st part	**A- Clinical Pharmacokinetics**:		3	6	8	
	B- Clinical Pharmacodynamics:		3	6	8	
	C- Practical applications of Clinical Pharmacology and Drug Therapy:					
2nd part	**A-Clinical trial Methods.**		4	8	8	
	B. Ethics in clinical trials.					
	C. Drug Evaluation, Development and Regulatory Authorities.					
	D. Monitoring Drug Therapy.					
	E. Plasma concentration measurement and monitoring the Pharmacokinetics of drugs					

7. Courses Content: code ---title --- content ----- present in course specifications ---- *Attached*

8. Pre-requests for admission to the program:--- present in Rules and Bylaws ----

Methods and rules for assessment for attendance of the program

الماجستير

مدة الدرا ة لنيل درجة الماجستير نتان علي الاقل وتكون علي جزئين-:

=الجزء الأول-:

التخصصات الاكلينكية : ومدته تة أشهر تبدأمن تاريخ التسجيل علي أن يعقد الامتحان في دورى ابريل و بتمبر من آل عام

العلوم الطبية الا ا ية : ومدته نة تبدأ من تاريخ التسجيل علي أن يعقد الامتحان بعد عام من تاريخ التسجيل

=الجزء الثاني-:

التخصصات الآلينكية : ومدته ثمانية عشر شهر تبدأ بعد النجاح في الجزء الأول علي أن يعقد الامتحان في دورى مايو ونوفمبر من آل عام بعد مناقشة الر الة

العلوم الطبية الا ا ية : ومدته نة تبدأ بعد النجاح في الجزء الاول علي أن يعقد الامتحان في دورى مايو ونوفمبر من آل عام بعد مناقشة الر الة0

يكون التسجيل لدرجة الماجستير مرتين في السنة الواحدة علي دورين-:

الدور الاول -: في شهر أآتوبر ويخصص لجميع الاطباء بمافيهم المعيدين بالكلية والاطباء المقيمن 31طبقا للشروط 1 / حتي / 8 بمستشفيات الجامعة ويبدأ قبول الملفات مستوفاة اعتبارا من8 المعلن عنها بالاعلان الداخلي

الدور الثاني -: في شهر ابريل ويخصص فقط للمعيدين بالكلية والاطباء المقيمين بمستشفيات الجامعة 31طبقا للشروط المعلن عنها 1 / حتي / 3 وتقدم ملفات التسجيل مستوفاة اعتبارا من3 بالاعلان الداخلي

يشترط في قيد الطالب لدرجة الماجستير-:

1-أن يكون الطالب حا لا علي درجة البكالوريوس في الطب والجراحة بتقدير جيد علي الاقل من احدى جامعات جمهورية مصر العربية أو علي دؤجة معادلة لها من معهد علمي آخر معترف به من الجامعات

– 2ان يكون قد أمضي السنة التدريبية أو مايعادلها

– 3أن يتفرغ للدرا ة لمدة نة علي الاقل

– 4موافقة جهة العمل الرئيسية

- 5موافقة مجالس الاقسام

مواعيد التسجيل وتقديم الملفات

شروط القيد

اجراءات تحديد الر الة ومناقشتها

=يتم تحيد عناوين الر ائل والاشراف بعد النجاح في الجزء الاول أ و قبله ولا يزيد العدد الاجمالي للجنة الاشراف طبقا لما هو متبع بمجالس الأقسام THESIS أو (ESSAY) عن ثلاثة مشرفين علي شكل

مناقشة الر الة

=تقدم الر الة للمناقشة بعد تة أشهرعلي الاقل من تاريخ موافقة مجلس الكلية علي أعتماد الموضوع علي أن يشترط الحصول علي دورتي الحا ب الالي والتيويفل (400 وحدة علي الاقل) قيل التقدم بصلاحية الر الة وتشكيل لجنة الحكم ولا يتم مناقشة الر الة الا بعد اعتماد أ .د / نائب رئيس الجامعة بأ بوعين علي الاقل علي الا تتجاوز الفترة ثلاثة أشهر دون مناقشة الر الة.

الامتحانات

الجزء الاول -: ويعقد في دورى ابريل و بتمبر بعد تة أشهر من تاريخ التسجيل (للتخصصات الاكلينكية)

وعام (للتخصصات الاكاديمية) و يجوز للطالب أن يتقدم بطلب دخول الامتحان مستوفيا ال LOG BOOK الموافقة قبل موعد الامتحان بشهرعلي الاقل الاقسام المعنية

الجزء الثاني -: ويعقد في دورى نوفمبر ومايو من آل عام بعد النجاح في الجزء الاول بثمانية عشر شهرا

)للتخصصات الاكلينكية (وعام) للتخصصات الاكاديمية (وبعد مناقشة الر□الة يجوز للطالب

لموافقة القسم المختص قبل ال أن يتقدم بطلب دخول الامتحان و مستوفيا الLOG BOOK

قبل موعد الامتحان بشهر علي الاقل

8- Methods and rules for assessment for attendance of the program:

	What to measure of ILOs
1-Written exam	Knowledge/ Understanding
2-Practical exam	Professional skills/General skills
3-Clinical exam	Professional and general skills
4-Oral exam	Intellectual skills
5-	
6-	
7-	

1. Methods of evaluation of the program:

Evaluator	Method	Sample
1-End year Students		
2-Graduates	Survey	20%
4-External evaluator or Examiner	Report	
5-Other methods		

Head of the Department Coordinator of the program:

Signature:

Date: