



جامعة بنها كلية الطب البشرى قسم طب الأطفال

توصيف برنامج ماجستير طب الأطفال عام (٢٠١٢-٢٠١٤)

* معلومات أساسية:

ا ـ اسم البرنامج: Master program of Pediatrics

٢ ـ طبيعة البرنامج: (مشترك)

Pathology, Anatomy, Bacteriology, Physiology, :- القسم/ الأقسام المسئولة عن البرنامج: Pharmacology, Biochemistry and Community.

4- تاريخ إقرار البرنامج في مجلس القسم: 7/6/٢٠١3

5- تاريخ إقرار البرنامج في مجلس الكلية 6/16 /1.7 م

6- مسئول البرنامج: Prof. Iman Abd El-Rehim

Prof. Ahmed Alshazly professor of Pediatric Benha - المراجع الداخلي-7

University

8- المراجع الخارجي Prof. Hala Salah El Din, Professor of Pediatrics Cairo المراجع الخارجي University

* معلومات متخصصة:

١ ـ الأهداف العامة للبرنامج:

1- Program aims:

The overall aims of the program are:

- 1.1.To provide candidates with the background knowledge of academic basis of pediatrics including embryology, physiology, biochemistry, pharmacology, microbiology, community and pathology.
- 1.2.To provide candidates with the knowledge and practical skills necessary in clinical pediatrics





- 1.3.To provide candidates with the knowledge and skills necessary to practice neonatal medicine and child health care.
- 1.4.To interpret basic laboratory and imaging data in pediatrics.
- 1.5.To provide graduate with essential knowledge and skills necessary to comprehend and apply clinical genetics
- 1.6.To provide candidates with the communication skills and attitudes towards patient care and ethics of treatment and research.
- 1.7. Orient graduate to principles of research methodology, interpretation and practice of basic research in pediatrics
- 1.8.To give graduate ability to acquire the competence and meet the need of our local community and respond appropriately to cultural and medical needs.)
- 1.9. Awareness of the contemporary advances and developments in medical sciences as related to child health
- 1.10. To improve graduate skills by awareness of importance of continuous medical education
- 1.11. know medical ethics and legal rights of patient and his family.
- 1.12.To use available resources in his work efficiently.
- 1.13.To communicate properly with his superior's and other team members
- 1.14. To act with integrity, credibility and work rules of noble medical profession with accept accountability.
- 1.15.to make proper decision in the accurate time of patients management

٢ - المخرجات التعليمية المستهدفة من البرنامج:

2- <u>Intended Learning Outcomes (ILOs)</u>:

٢ أ - المعرفة والفهم:

2-a Knowledge and understanding:

to:

On successful completion of the program, the graduate will be able

2.a.1 *Demonstrate* the physiological, developmental, microbiologic, pathological and biochemical basis of neonatal and pediatric diseases





- 2.a.2 *Recognize* the normal function of the body in different pediatric age group.
- 2.a.3 *Discuss* diseases types of various systems included in the neonatal and pediatric medicine and their drug therapy.
- 2.a.4 *Highlight* the differential diagnosis of the different clinical presentations among neonates and children.
- 2.a.5. *Identify* the basic and updated data in different pediatric branches
- 2.a.6. Recognize the different genetic problems in the pediatric age
- 2.a.7. *Categorize* different pediatric emergencies and methods of dealing with.
- 2.a.8. *Recognize* basic and advanced knowledge in Pediatrics and related sciences (Physiology, Pathology, and Genetics)
- 2.a.9. Demonstrate the basic principles and practice of scientific research.

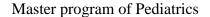
٢ ب ـ القدرات الذهنية :

2-b <u>Intellectual skills</u>:

On successful completion of the program, the graduate will be able to:

- 2-b-1 Analyze cases presenting with different medical problems
- 2-b-2 *Interpret* medical history, clinical data and diagnostic findings to reach to proper diagnosis and treatment.
 - 2-b-3 *Solve* different clinical problems in neonatal period and early infancy.
- 2-b-4 *Differentiat*e between different pediatric diseases to reach diagnosis.
 - 2-b-5 *Evaluates* clinical data of the patients
- 2.b.6. *Design* and carry out research in different era of science related to pediatric diseases.
- 2.b.7. *Interpret* different data to detect the point of weakness and strength.
 - 2.b.8. *Recogniz*e evidence based learning and practice.







- 2.b.9. *Plan* to improve professional performance in heath field
- 2.b.10. *Formulate data* to detect points of strength and weakness.

٢ ج ـ مهارات مهنية وعملية :

2-c Practical and Professional skills:

On successful completion of the program, the graduate will be able to:

- 2.c.1 *Manage* problem cases in clinical neonatology and pediatric medicine.
- 2.c.2. *Interpret* the presentation of different genetics problems and child health
 - 2-c-3 *Manage* cases presenting with different medical problems in different pediatric age groups
 - 2-c-4 **perform** basic skills acquired related to various systems and diseases to diagnose different conditions.
 - 2-c-5 *Apply* basic procedures for care of neonates in intensive care, and pediatric intensive care as well as outpatients
 - 2-c-6 **manage** patient by proper plan with regular evaluation.
 - 2.c.7 *Take* proper medical history of newborn, neonate, child and adolescent
 - 2.c.8 *Perform* basic procedures for acutely and chronically ill pediatric patients in general wards.
 - 2.c.9.manage to improve professional health performance.

2.د: مهارات ع

2-d General and transferable skills:

By the end of the program, graduate should be able to:

- 2.d.1. *Recognize* the legal and ethical aspects in pediatric.
- 2.d.2. **Respect rights** of patients and their families to full understanding, and involve them in management decision.
- 2.d.3. *Communicate* clearly and effectively with patients and their family members with respect to them, colleagues and all members of the health profession.
- 2.d.4. *Explain* to the patients and their families the nature of illness, and the management plan to understand treatment options in easy way.





- 2.d.5. *Cope up* with difficult situations as breaking news.
- 2.d.6. *Demonstrate* competence in problem solving
- 2.d.7. *Develop* personal and career development plan.
- 2.d.8 *Use* different sources of data and knowledge
- 2.d.9.*Work* in one team and deal with proper time.
- 2.d.10.*Use* different sources to get different knowledge by them selves in different types of the diseases
- 2.d.11. *Evaluate* him-self and the others to learn the update diagnostic and therapeutic protocols of pediatric diseases and emergency.

٣ - المعايير الأكاديمية للبرنامج:

3. Academic Standards:

Academic Standards of Master Program of Pediatrics, approved in department council date 7 /6 / 2013, and in faculty council NO (354) date 16 / 6 / 2013. (ملحق)

4- Reference standards

4- العلامات المرجعية:

المعايير القياسية لبرامج الدراسات العليا (درجة الماجستير)الصادرة عن الهيئة القومية لجودة التعليم والإعتماد (مارس ٢٠٠٩)

Academic reference standards (ARS) , Master Program (March 2009)

, which were issued by the National Authority for Quality Assurance & Accreditation of Education NAQAAE (ملحق ۲)

ه ـ هيكل ومكونات البرنامج:

(5): Program structure and contents:

أ ـ مدة البرنامج : years

Program duration

- **4** 1st part: One Semester (6 months).
- **♣ 2nd part:** Two Semesters (12months).
- **Thesis:** One Semester (6months)





ب ـ هيكل البرنامج: Program structure

•	Total	hou	rs of	program	45 credit hours
		_	_		

• Theoretical13hrs.....

• Practical20hrs.....

• Thesis6hr

• University and Faculty...6hr.....

Compulsory:

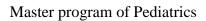
Selective: Elective

ج- مستويات ومقررات البرنامج:

الزامي Compulsory

احرابع ي u1501 y			
البند	المقرارات	الْكود	الساعات المعتمدة
متطلبات	الجامعة والكلية	UNVI 601	تاحات ۲
الجزء الأول	١- فسيولوجيا	PEDI 601	۱.۵ ساعة(۱،۲،۳)
	٢- الكيمياءالحيوية	PEDI 601	
	٣- فارماكولوجيا	PEDI 601	
	٤- باكتريولوجيا	PEDI 602	١٠٥ ساعة (٤،٥،٦)
	٥- علم الاجنة	PEDI 602	
	٦- باثولوجيا	PEDI 602	
كراسة الانشطة	تسجل بها الأنشطة المختلفة مثل حضور الندوات العلمية والمؤتمرات والدورات التدريبية وإجراء أبحاث إضافية		٥ ساعات
الجزء الثانى	ويشمل الأتى:		







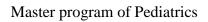
۲۱ ساعة ۱.۵ساعة	PEDI 604 PEDI 605	طب الأطفال (مقرر نظري وعملي وإكلينيكي) مقرر علمي في الوراثة – النمو والتطور	
2.5ساعة	PEDI 606	مقرر علمي في رعاية الطفل بما فيها حديثي الولادة والمبتسرين والصحة العامة والتغذية	
٦ ساعات			رسالة الماجستير
٥٤ ساعة			الاجمالي

First part (24 weeks duration/ 6 months)

a- Compulsory courses:

Course Title	Course		NO.	of hours per week		Total teaching
	Code	Theo	oretical	Laboratory /practical	Total	hours
		Lectures	Seminars			
Physiology	PEDI	1			1	16
Pharmacology	PEDI74	1			1	15
Biochemistry	PEDIT	1			1	15
Pathology	PEDITOT	1		1	2	22
Microbiology and immunology	٠ ٢	١		1	2	22
Embryology	PEDIT	`			١	15
Log book						
activities Total:					8	104Hours







- b- Elective courses: none
- c- Selective: none

Second part (48 weeks duration/12 months)

a- Compulsory courses.

Course Title	Course Code		NO. of	hours per week		Total teaching hours
		Theor Lectures	etical seminars	Laboratory /practical	Total	weeks
Pediatric	PEDI7.£	۵	٣		V 16	16
Neonatology and child welfare	PEDI7•6	1		' 2		r
Genetic and child health	PEDI7.6	1		1		2
Community Log book activities	PEDI7-6	1		1	L	2
Total:		8	٣	11		Γ2
Thesis						6 credit

b- Elective courses: none

c- Selective courses: none

6- محتويات المقرات (راجع توصيف المقررات)





- كود المقرر:
- اسم المقرر:
- المحتويات: (طبقاً لما هو مذكور في اللائحة)

7 - متطلبات الإلتحاق بالبرنامج : (طبقاً لما هو مذكور في اللائحة):

(7): Program admission requirements:

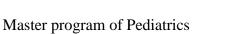
مادة (٤): يشترط في قيد الطالب لدرجة الماجستير:

(1)

- أ- أن يكون حاصلا على درجة البكالوريوس في الطب والجراحة من احدى جامعات ج.م.ع أو على درجة معادلة لها من معهد علمي معترف به من الجامعة بتقدير جيد على الأقل.
- ب- يسمح للحاصل على الدبلوم وفقا لنظام هذه اللائحة وبتقدير جيد على الأقل بتسجيل رسالة لاستكمال درجة الماجستير بشرط ألا يكون قد مر أكثر من ثلاث سنوات على تاريخ حصوله على درجة الدبلوم وبغض النظر على تقديره في درجة البكالوريوس.
 - ت- يسمح للحاصل على الدبلوم وعلى خلاف لنظام هذه اللائحة أن يسجل لدرجة الماجستير بشرط أن يكون تقديره في الدبلوم لا يقل عن جيد وبغض النظر عن تقديره في البكالوريوس.
 - (٢) أن يكون قد أمضى السنة التدريبية أو ما يعادلها (سنة الامتياز)
 - (٣) أن يتفرغ للدراسة لمدة سنة على الأقل في الجزء الثاني (فصلين دراسيين) مادة (٥): يكون التقدم للقيد لدرجة الماجستير مرة واحدة في السنة خلال شهري يوليو وأغسطس من كل عام.
 - تبدأ الدراسة لدرجة الماجستير في شهر أكتوبر من كل عام.

٨ - القواعد المنظمة لإستكمال البرنامج:







مادة (٦): تتولى لجنة الدراسات العليا بالكلية عن طريق لجنة تشكل لكل تخصص من أعضاء مجلس القسم التابع له المادة والقسم المانح للدرجة وضع البرنامج التفصيلي للمقررات في حدود الساعات المعتمدة الواردة باللائحة وعند الاختلاف يتم الاسترشاد بمقررات جامعة القاهرة ومقررات الشهادات العالمية الاوربية والامريكية يعتمدها مجالس الأقسام ثم يقرها مجلس الكلية وتشمل هذه الساعات محاضرات نظرية ودروس عملية وتدريب اكلينيكي ومحاضرات وندوات مشتركة.

مادة (٧): يشترط في الطالب لنيل درجة ماجستير التخصص في أحد الفروع الاكلينيكية والعلوم الطبية الأساسية:

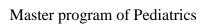
- أ- حضور المقررات الدراسية والتدريبات الاكلينيكية والعملية والمعملية بصفة مرضية طبقا للساعات المعتمدة.
- ب- أن يقوم بالعمل كطبيب مقيم أصلى أو زائر لمدة سنة على الأقل في قسم التخصيص بالنسبة للعلوم الاكلينيكية.
 - ت- أن ينجح في امتحان القسمين الأول والثاني.
 - ث- اجتياز الطلب لثلاث دورات في الحاسب الآلي (دورة في مقدمة الحاسب دورة تدريبية متوسطة دورة في تطبيقات الحاسب الآلي) وذلك قبل مناقشة الرسالة.
 - ج- اجتياز اختبار التويفل بمستوى لايقل عن ٤٠٠ وحدة وذلك قبل مناقشة الرسالة.
 - ح- أن يقوم باعداد بحث في موضوع تقره الجامعة بعد موافقة مجلس القسم ومجلس الكلية ينتهي باعداد رسالة تقبلها لجنة التحكيم.

9 طرق وقواعد تقييم الملتحقين بالبرنامج:

9- Students Assessment methods:

مخرجات التعلم المستهدفة	الوسيلة	۴
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To assess knowledge, understanding & intellectual skills. 2.a.1-2.a.2-2.a.3-2.a.4-2.a.5-2.a.6-2a.7,2.a.8-2.b.3-2.b.4-2. b.5-2.b.6	Written examination	1
To assess knowledge, understanding, intellectual skills & General & transferable skills 2.a.1-2.a.2-2.a.3-2.a.5-2.a.6-2.b.4-2.c.3-2.c.4- 2.d.1-2.d.2:2.d.11	Oral examination	2
To assess knowledge, understanding intellectual skills, clinical, and professional ,General & transferable skills 2.a.4-2.b.1-2.b.2-2.b.3-2.b.4-2.b.5-2.c.1-2.c.2-2.c.3-2.c.5-2.c.6-2.c.7-2.c.8-2.d.1:2.d.11	Practical examination & clinical examination	3
To assess knowledge, understanding intellectual skills, clinical, and professional ,General & transferable skills 2.a.9-2.b.5-2.b.6-2.b.9,2.b.102.c.92.d.1-2.d.2-2.d.3-2.d.7,2.d.8,2.d.10	Thesis discussion	4

Final exam.

First part

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إجمالي	أكليناكإ	ريلمذ	ৰ্থিকয়ক	تعريري	اللحتبار	المهرر	
		10	15	25	اختبار تحريري مدته ثلاث ساعات (١-٣-٢)	1- الباثولوجيا	
		10	10	20	+ اختبار عملي +هغوي	itistet the -1	
			25	25	اختبار تعريري	قهُمِلُال مِلدُ ٢	
			20	20	€	- 316 18 - 1	
			25	25	اختبار تدريري	11211 #	
			40	40	(E	٣- الميكرولوجيا	
			25	25	اختبار تحريري مدته ثلاثه ساعاته (٤+٥+٢)	٤-الغسيولوجيا	





					+ شغوي		
			25	25	اختبار تعريدي	٥- الغارماكولوجيا	
			4	40	+ هغوي	ition description — o	
			25	25	اختبار تدريري	7— ال <u>كيمياء الميوية</u>	
			20	20	+ ویزی +	al district in all and a control of the control of	
٣٠٠							
	:رجة	إجمالي الد					

Second part

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				100		–طبح أطغال
					اختباران تحريريان محة كل منهما ثلابه	MCQ+
	17.		٤٠	+	سالمابعم	problem
				100	+ احتبار هغمي + احتبار إكلينيكي	solving cases
			٥٠	1++	احتباران تحريريان محة كل منهما ثلاث	مديثيي الولاحة
					حبالالم	وصحة الطغل
			+	+	+ احتبار هغمي + احتبار إكلينيكي	
			۲۵	۲۵		
					امتدان تدریری +هغوی	والوراثة
		۵	۲۰	۲۵	امتدان تدریری + شغوی	جبه) قماذ قعم
		0			Company (China) Coring	(zaï4a
76.	بمالي	4				
	حرجة	11				

Thesis: pass or fail according to committee decision approved by Department, Faculty, and University councils

10 - طرق تقويم البرنامج:

10- Evaluation of Program:





Evaluator	Tools	Signature
Internal evaluator (s)	Focus group discussion	Report Γ -1
مقییم داخلی	Meetings	
External Evaluator (s)	Reviewing according to	1-2 Report
مقییم خارجی	external evaluator	
	checklist report of NAQAAE.	
Senior student (s)	مقابلات , استبيان	قبالا نه قتيد
طلاب السنة النهائية		
Alumni	مقابلات ،استبيان	قبلك نه %٥٠ ند لاتبة لا قبيد
الخريجون		المر ٣ حفعات
Stakeholder (s)	مقابلات ،استبيان	حباهم جيمها قائمه قنيد
أصحاب العمل		العمل
Others	None	
طرق أخرى		

Program coordinator.

Prof. Iman Abd El-Rehim Signature & date





توصيف المقررات

Program courses

First part
1- Physiology
2- Biochemistry
3- Pharmacology
4- Pathology
5- Anatomy & Embryology
6-Bacteriology
Second part
1- PAEDIATRICS
2- PAEDIATRICS (Child Health and Neonatal care)
3- PAEDIATRICS (Genetics)
4- Community Medicine



Benha University

Faculty of Medicine

Department of physiology

Course Specifications

Course title: PHYSIOLOGY

Code: PEDI 601

Academic Year (2013 – 2014)

- **Major or minor elements of the program:** Minor of pediatric master program.
- Academic year of Master program: 2013-2014.
- Date of specification approval:
- Date of specification approval:
 - Department council date...7/6/2013.....

A- Basic Information

- Allocated marks: <u>50</u> marks.
- Course duration: <u>15</u> weeks of teaching.

Teaching hours: lectures: <u>15hrs</u> practical:-----

B- Professional Information

- 1 Overall Aims of Course
- **1.1**. approaching to the detailed knowledge of human physiology.
- **1.2.**facilitate understanding the physiological data for the student in the clinical practice of pediatrics.
- 2- Intended learning outcomes of course (ILOs)
- 2.1- Knowledge and understanding:





By the end of this course, students should be able to:

- 2.1-1 List according to priority the main functions of systems, organs and cells.
- 2.1.2- Mention important physiological definitions and laws.
- 2.1.3- describe different mechanisms of homeostasis and how to use it in applied physiology.
- 2.1.4- provide excellence in medical education, research
- 2.1.5- explain to the detailed knowledge of physiology in relation to pediatrics.

2.2- Intellectual skills:

By the end of this course, students should be able to:

- 2.2.1- distinguish deviations from the normal physiology and its effects.
- 2.2.2- Interpret physiological data into clinical manifestations .
- 2.2.3- analyze physiological information in the form of simplified diagrams with complete data on it.
- 2.2.4- correlate different branches of physiology to that of pediatrics.
- 2.2.5- Analyze any physiological curve related to pediatrics.
- 2.2.6-. combined the normal structure and function of the human body and mind at the molecular, biochemical, cellular, levels to maintain the body homeostasis.





2.3- Professional skills:

By the end of this course, students should be able to:

- 2.3.1- comment on acid base and electrolyte report.
- 2.3.2-performe pulmonary function tests
- 2.3.3- writes ECG report findings.
- 2.3.4- Perform tests showing the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.

2.4.- General and transferable skills

By the end of this course, students should be able to:

- 2.4.1-communicate properly and cautiously in a lab.
- 2.4.2 Effective communication with other team members.
- 2.4 .3 Self-assessment and determine the educational needs.

Content:

- Autonomic Receptors.
- Gas transport by the blood.
- Surfactant.
- Factors affecting exchange of gases across the pulmonary Membrane.
- Regulation of respiration.
- Hypoxia and cyanosis.
- Arterial blood pressure and its regulation.
- C.O.P and its regulation.
- Capillary circulation.
- Hemorrhage and shock
- Edema.
- Water and electrolyte balance.
- Acid Base balance.





- Functions of renal tubule.
- Thyroid Hormones & its disturbance.
- Physiology of growth& its disturbance.
- Supra renal gland hormones.
- Basal ganglia
- Pyramidal and extra pyramidal tracts.
- UMNL and LMNL.
- Anemias.
- Hemostasis.
- Erythropoiesis
- · Leucocytes and immune system.
- Fever
- Vomiting
- Intestinal Motility and secretion
- Jaundice.

4- Teaching and learning methods:

4.1. Methods used:

- 4.1-1.General lectures
- 4,1.2.-seminares
- 4,1.3-confrences

4-2- Teaching plan:

Time plain:

Item	Time schedule	Teaching hours
Lectures	1time/week	
	(each time 1hour)	15hours

5- Student assessment methods:

5-a) Assessment TOOLS:





Tool	Purpose (ILOs)
Written examination	To assess knowledge acquisition, including
	MCQs and problem solving 2.1.1:2.1.5
	2.2.1:2.2.62.3.1:2.3.4
Oral examination	To assess understanding and stability of
	knowledge given, attitude and presentation.
	2.1.1:2.1.52.2.1:2.2.62.3.1:23.4
	2.4.1:2.4.3

5-b) TIME SCHEDULE:

Exam	Week
- Final exam	at end of term (May-June)

5-c-Assessment time schedule

Assessment 1... Written and oral

5-d-weighting system (formative or summative).

Weighting System:

Examination	Marks allocated	% of Total Marks
1- Final exam:		
a- Written	25	50%
b- Oral	25	50%
Total	50	100%

- Passing grades are: EXCELLENT >85%, VERY GOOD 75-<85%, GOOD 65- <75% and FAIR 60-<65%.

FORMATIVE ASSESSMENT:

• Student knows his marks after the Formative exams.

5-e) Examination description:

Examination	Туре	Description





Final Examination	Written paper composed of short essay-type questions, long assay.
	One oral examination station with 2 staff members (10-15 minutes: 4-5 questions)

6- List of references

6.1- Essential books (text books)
Poul-Erik Paulev(2007): Medical Physiology And Pathophysiology
Essentials and clinical problems.

- 6.2- Recommended books
 Poul-Erik Paulev (2009): Medical Physiology Textbook
- 6.3. Kim E. Barrett ,Susan M. Barman ,Scott Boitano ,Heddwen Brooks: Ganong's Review of Medical Physiology, 24th Edition (LANGE Basic Science) April 26, 2012
- 6.4 Periodicals, Web sites, ... etc

www.jap.physiology.org.

www.physiologyonline.physiology.org/cgi/content

- 7- Facilities required for teaching and learning
- 1. Data show.
- 2. Overhead projector.
- 3. Postgraduate laboratories with their equipments.

Course coordinator: Prof. Alaa Elteleis **Head of Department:** Prof. Alaa Elteleis





Benha University

Faculty of Medicine

Department of Medical Biochemistry

Course Specifications

Course title: Medical Biochemistry

(Code): PEDI 601. Academic Year: 2013 – 2014.

- **Department offering the course:** Medical Biochemistry.
- Major or minor elements of the program: Minor in Pediatrics master program.
- Date of specification approval:
 - Department council date...7/6/2013.....

A) Basic Information:

- **Allocated marks:** <u>50</u> marks.
- Course duration: 15 weeks of teaching
- **Teaching hours:** <u>15</u> hours <u>lectures and tutorial</u>

B) Professional Information:

1. Overall Aim of the Course:

- 1.1. Provide a broad education in fundamental aspects of medical biochemistry and molecular biology;
- 1.2. Provide a sound knowledge and understanding of the biochemical importance of macro-, micronutrients, hormones and enzymes;
- 1.3. To illustrate and/or describe the metabolic pathways of macronutrients and nucleotides;





2- <u>Intended Learning Outcomes (ILOs)</u>:

2.1- Knowledge and understanding:

By the end of the course, students should be able to:

- 2.1.1. Describe the main metabolic pathways of the three main dietary sources of energy: carbohydrates, fats and proteins, their digestion absorption, their oxidation to release energy.
- 2.1.2explaine the regulation of these pathways and the integration of their metabolism
- 2.1.3 point-out biochemical alteration in related metabolic disorders.
- 2.1.4 identify the role of vitamins and enzymes required for catalysis of these processes, in addition to their deficiency manifestations.
- 2.1.5 Describe the contribution of certain tissues like liver, kidney and muscles to metabolism in health and disease.
- 2.1.6. Discuss the metabolism of the major minerals and trace elements, their functions and alterations in metabolic processes due to deficiency or excess of these elements.
- 2.1.7. list nucleic acid metabolism with special emphasis on their role in protein synthesis.
- 2.1.8 State the general principles of genetic engineering and how may this be used for the diagnosis and management of diseases.
- 2.1.9 Describe the components of some body fluids e.g. blood, urine and milk.

2.2. Intellectual skills:

- 2.2.1 Analyze pathological glucose tolerance curve.
- 2.2.2 Interpret medical laboratory reports.
- 2.2.3Solve problems related to metabolic disturbances in a given case study report.





2.3. General and transferable skills:

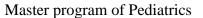
By the end of the course, students should be able to:

- 23.1. Communicate properly with the staff members as well as with each other.
 - 2.3.2. Work effectively in groups.
 - 2.3.3. Use available resources to get data& knowledge.

3- Course contents:

Subject	Lectures (hrs)	Tutorial s (hrs)	Total (hrs)	% of Total
Blood pH regulation, acidosis and alkalosis	1/2		1/2	
Major pathways of glucose oxidation, blood glucose regulation, hyper- and hypoglycemia	1		1	
Diabetes Mellitus, galactosemia & glycogen storage disease.	1	1	2	
Plasma lipoproteins, hyperlipidemia, hypercholesterolemia, F.A. oxidation, ketosis, lipotropic factors, fatty liver	1	1/2	1 ½	
Inborn errors of metabolism of Individual amino acids	1	1/2	1½	
Heme metabolism, hemoglobinopathies, porphyria and jaundice	1/2	1/2	1	
Vitamins & their deficiency manifestation	1		1	
Calcium & phosphate homeostasis, sodium, potassium, iron and their deficiency manifestation.	1		1	
Hyperuricemia & gout	1/2	1/2	1	
DNA structure, replication, transcription, regulation of gene expression, DNA damage and repair.	1		1	
RNA structure, transcription and posttranscriptional modification	1/2		1/2	
Cell cycle & apoptosis	1/2		1/2	
Protein synthesis: translation and posttranslational modifications.	1/2		1/2	







Recombinant DNA technology, blotting techniques.	1		1	
Plasma enzymes, their diagnostic values, Liver & kidney function tests	1/2		1/2	
Urine, blood and milk: normal and abnormal constituents & their clinical relevance.	1/2		1/2	
Total	12	3	15	100

III-C) PRACTICAL CLASSES: not applicable

4- Teaching and learning methods:

METHODS USED:

- 1. Lectures
- 2. Tutorials.

TEACHING PLAN:

Lectures: One lecture /week, one hour each, for 12 weeks, from 12:00 am to 1:00pm according to the current time table in the biochemistry department halls.

Tutorials: one hour/week, for 3 weeks, from 1:00 pm to 2:00pm according to the current time table in the biochemistry department halls.

Practical classes: not applicable

Time plan:

Item	Time schedule	Teaching hours	Total hours
Lectures	Once /week (for 10 week)	one hour each (12: 00 am to 1: 00 pm)	12
Tutorials	Once /week (for 3 weeks)	one hour each (1: 00 pm to 2: 00 pm,)	3





Total 15

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA: attendance percentage of > 75% must be fulfilled before the final exam.

5-B)) Assessment TOOLS:

Tool	Purpose (ILOS)
Written examination	To assess knowledge ,understanding and intellectual
	skills
	2.1.1:2.1.9—2.2.1.:2.2.3
Oral examination	To assess understanding and stability of knowledge,
	intellectual, general and transferable skills
	2.1.1:2.1.9—2.2.1.:2.2.3—2.3.1,.2.3.2,2.3.3

5-C) TIME SCHEDULE:

Exam	Week
Final exam	6 months after registration

5-D) Weighting System:

1- FORMATIVE ASSESSMENT:

Student knows his marks after the Formative exams.

2- SUMMATIVE ASSESSMENT:

Examination	Marks allocated	% of Total Marks
1. Written exam:	25	50%
2. Oral exam:	25	50%
Total	50	100%





• The minimum passing grade is 25 marks (50% of the total marks), provided that at least 12.5 marks (50% of marks for written exam) are obtained in the written exam.

5-E) Examinassions description:

Examination	Description	Marks
1- Written exam	Written exam (1 -hour) composed of short essay questions, multiple choice questions and a case study report.	25
2- Oral exam	One session of oral examination	25
Total		50

6- <u>List of references</u>:

- Essential books: Harper's Biochemistry by: Roberk K. Murray, Daryl K. Granner, Peter A. Mayes and Victor W. Rodwell.26th edition 2003
- Recommended Books: Lippincott's Illustrated Reviews:
 Biochemistry, 6th edition ed. Richard A. Harvey and Denise R. Ferrier 1
 Jul 2010
- Periodical websites: www.clinchem.org

7- <u>Facilities required for teaching and learning</u>:

Facilities used for teaching this course include:

- Lecture halls
- Small group classes
- Information technology / AV aids

Course coordinator: Prof. Dr. Azza Elbermawy **Head of Department:** Prof. Dr. Azza Elbermawy



Benha University

Faculty of Medicine

Department of Anatomy & Embryology

Course Specifications

- Course title: __Anatomy & Embryology
- (Code) PEDI 502
 - Academic Year (2013 2014)
- Department offering the course:_Anatomy & Embryology
- Major or minor elements of the program: minor in master program of Pediatrics
- Academic level: first part
- Date of specification approval:
 - Department council date...7/6/2013.....

A) Basic Information:

- Allocated marks 50_marks
- Course duration: 15 weeks of teaching 1st part
- **Teaching hours:** lectures 15hrs

B) Professional Information:

1- Overall Aim of the Course:

- 1.1 to provide the postgraduate educational experience necessary for further practice in General & Special Embryology .
- 1.2 To educate postgraduates about the experimental embryology to give them the key stone in understanding the anatomy and congenital malformation.

2- <u>Intended Learning Outcomes (ILOs)</u>:





2.1 Knowledge and understanding:

By the end of the course postgraduates should be able to:

- 2.1.1 Describe the morphology , location ,vasculature , innervations & relations of different parts of human body.
- 2.1.2 Classify the most common variations to give an idea for the clinical application.
- 2.1.3 Summarize the radiological anatomy to know structure of deeper details.
- 2.1.4 Identify the surface anatomy of the visible and deeper structures of the body.

2.2 Intellectual skills:

By the end of the course, postgraduates should be able to:

- 2.2.1- Interpret result of radiological and surface anatomy
- 2.2.2- Solve problem of environmental factors on the development of body systems and possible congenital formation.

2.3. professional skills:

By the end of the course, postgraduates should be able to:

2.3.1 manage all types of data of normal & abnormal development.

2.4 General and transferable skills

By the end of the course, postgraduates should be able to:

- 2.4.1. Establish life-long self-learning required for continuous professional development.
 - 2.4.2. Use the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.





- 2.4.3. Establish effective interpersonal relationship to Communicate ideas and arguments .
- 2.4.4. Present information clearly in written, electronic and oral forms.
- 2.4.5 Communicate clearly, sensitively and effectively with colleagues from a variety of health and social care professions.

3- Course contents:

GENERAL EMBRYOLOGY:

- -Gametogenesis, fertilization, Cleavage, Blastocyst and implantation, placentation, Foetal membranes& Twinnings and nutrition of the zygote, Embryo and fetus.
- -Embryogenesis:Embryonic discs,Bilaminar (Epiblast&Hypoblast)&Trilaminar discs.Notochord,Ectoderm,Endoderm and Mesoderm and their fate,Foldings(mechanism&Results).
- -Prenatal, periods&Growth" Prenatal stages".
- -Congenital maleformations:causes and mechanisms"teratogesis".
- -Growth:Def.,Types,patterns and Growth factors&Hormones. **SPECIAL EMBRYOLOGY:**(Dev.&Anomalies):
- -Digestive, Urinary, Genital, Cardiovascular, Lymphatic, Respiratory, Nervous, Endocrine, Muscular, Skeletal, Articulatory, and Integumental (skin) systems.
- -Branchial arches, Tongue, palate, nose, Ear, eye, serous sacs and diaphragm (pericardium, pleura & meninges and peritoneum.

NEONATAL ANATOMY&GROWTH:

- -Head:skull&fontanelles,tympanic antrum+mastoid process,Air siuses,Mandible,suctorial pad and teeth.
- -Neck, Larynx and trachea.
- -Thorax.
- -Subcutaneous fat, Vertebral column, spinal cord.





-Abdominal cavity, Liver, Peritonealfat, Kidneys, Urinary bladder, Peritonuem and Prepuce

4- <u>Teaching and learning methods</u>:

METHODS USED:

- 1. Modified Lectures
- 2. Small group discussions
- 3. Practical classes
- 4. Problem Solving

TEACHING PLAN:

Lectures: Lectures

Time plan:

Item	Time schedule	Teaching hours	Total hours
Lectures	1_times/week;	15 h	100%
	1hour each		
Total	1 hours/week	15 h	100%

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA:

1.Log book.

5-B Assessment TOOLS:

Tool	Purpose (ILOS)		
Written examination	To assess knowledge ,understanding,		
	intellectual ,professional skills		
	2.1.1:2.1.4—2.2.1,2.2.2—2.3.1		
Oral examination	To assess understanding and stability of		
	knowledge, intellectual, professional skills		
	given, general and transferable skills.		
	2.1.1:2.1.4—2.2.1.,2.2.2—2.3.1—2.4.1:2.4.5		

5-C) <u>TIME SCHEDULE</u>:





Exam	Week
1- First exam	May or September
2- Second exam	June or October

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
1- First exam a- Written	25	50%
b- Oral	25	50%

^{75- &}lt;85%, GOOD 65- <75% and FAIR 60-<65%.

FORMATIVE ASSESSMENT:

Postgraduates know his marks after the Formative exams.

5-E) Examinations description:

Examination	Type	Description
Final	1. Written	A three-hour written paper composed of Long & short essay-
Examination		type questions, MCQs (two papers-3 hours each)
	2. Oral	One oral examination station with 2 staff members (20-30
		minutes)

6- <u>List of references</u>:

6.1- Essential books (text books):

6.1Susan Standring (2008):Gray's Anatomy: The Anatomical Basis of Clinical Practice, Expert Consult, 40th edition—November 21, 2008

6.2.Langman's Medical Embryology – 1 Apr 2006 by Thomas W. Sadler ,11th edition, from Lippincott Williams and Wilkins

6.2- Recommended books:





- Bruce Carlson: Human embryology& development biology,2009, 4th edition, Mosby, Elsevier.
- **6.3- Periodicals, Web sites,** ... etc: www.bfom.edu.eg.

7- <u>Facilities required for teaching and learning</u>:

Facilities used for teaching this course include:

• Lecture halls: 1

• Laboratory: 1

Information technology / AV aids

• Emryogenic cadavers if possible.

Course coordinator: Prof Dr. Abd-Elwanees Al-Awdan.

Head of Department: Prof. Sadia Shalaby





Benha University

Faculty of Medicine

Department of pathology

Course Specification

Course title: Human Pathology

(Code): PEDI 502

Academic Year (2013 – 2014)

- Major or minor elements of the program: minor in master program
 of Pediatrics
- Academic level: first part
- Date of specification approval:
 - Department council date...7/6/2013.....

A) Basic Information:

- **Allocated marks:** <u>50</u> marks
- Course duration: 24 weeks of teaching
- Lectures: 8hr Practical: 11hr

B) Professional Information:

1- Overall Aim of the Course:

- 1.1. Apply basic pathological knowledge essential for the practice
- 1.2. To provide basic and specialized services in relation with biopsy diagnosis in the practice of medicine and investigations.
- 1.3. To determine the running problems as early tumor detection and diagnosis of most of human body system diseases.
- 1.4. Diagnose of practical problems as cases study and clinical assessment
- 1.5. Develop recent tools & ways essential for medical practice.
- 1.6. to aware of his role in the progress of society and the environment in the light of international & local changes.
- 1.11. Respect the practical rules with honesty.





1.12. Lifelong learning competencies necessary for continuous professional development.

2- <u>Intended Learning Outcomes (ILOs)</u>:

2.a. Knowledge and understanding:

By the end of the course, students should be able to:

- 2.1.1. mention the dissection of different types of biopsies.
- 2.1.2. Identify laws in relation to medical practice and acquaintance with related amendments and judgments passed byl courts .
- 2.1.3 Describe the clinical manifestations and differential diagnosis of common pathological cases.
- 2.1.4. explain the principles that govern ethical decision making in clinical practice as well as the pathological aspect of medical malpractice.
- 2.1.5. Identify the scope and impact of human rights law on persons and groups.

2.b. Intellectual Skills:

By the end of the course, students should be able to:

- 2.2.1. solve problem and make decision skills necessary for proper evaluation and management.
- 2.2.2 interpret the risky problems that could be met during taking biopsies.
- 2.2.3. Analyze the clinical and investigational database problem to be proficient in clinical solving.
- 2.2.4. interpret to development in his practice.
- 2.2.5.distinction the most appropriate and cost effective diagnostic procedures for each problem.
- 2.2.6. design the formula of research hypothesis & questions.
- 2.2.7. analyze the questioning approach to own work & that of others to solve clinical problems

2.c. Practical and Clinical Skills:

By the end of the course, students should be able to:

- 2.3.1. Diagnose all important pathological aspects for early cancer detection and assessment.
- 2.32. Perform the gross examination and able to describe the findings of different organs efficiently
- 2..33. Diagnose different cases problem
- 2.3.4. perform the assessment of reports like cancer assessment report, cytological report and immunohistochemical report.

2.d. General and transferable Skills:

By the end of the course, students should be able to:

2.4.1. work effectively as a member or a leader of an interdisciplinary team and





- 2.4.2. Perform the evaluation of others by putting rules & regularities .
- 2.4.3. Perform life-long self-learning required for continuous professional development
 - 2.4.4. communication technology to remain current with advances in knowledge and practice by using the sources of biomedical information.
 - 2.4.5. perform self criticism. .
 - 2.4.6. Perform information by all means, including electronic means.

1-3- Course contents:

Subject	Lectures	Practical	Total
	(hrs)	(hrs)	(hrs)
General Pathology			
Cell response to injury, Stem cells and repair, Tissue deposits	1/2	0	1/2
Inflammation ,Granulomas ,Viral disease	1/2	1	1.5
Disturbance of growth Neoplasia, Developmental and genetic diseases	1	1	2
Circulatory disturbances, Radiation Basic imunopathology	1	0	1
Diagnostic methods in pathology	1	0	1
Special Pathology			
Diseases of Infancy & Childhood	1/2	0	1/2
Tumors of infancy and childhood	1/2	2	2.5
Rickets.	1/2	0	0.5
Diseases of the Renal system:	1/2	1	1.5





Diseases of Cardiovascular system	1/2	1	1.5
Diseases of G.I.T. & Liver	1/2	2	2.5
Diseases of Lymphatic system, blood &bone marrow	1/2	2	2.5
Diseases of CNS- Bone	1/2	1	1.5
Total	8	11	19

4- Teaching and learning methods:

METHODS USED:

- 4.1-General lectures & interactive learning.
- 4.2-Small group discussions and case studies
- 4.3-Practical sessions
 - a- Histopathology slide lab
 - b- Museum of pathology.

TEACHING PLAN:

Lectures: Division of students into 3 groups	3
<u> </u>	<u>? </u>
Tutorials:	
Practical classes	
Time plan:	

Item	Time schedule	Teaching hours	Total hours
Lectures	1_times/week;	11w	8hr
	one hour each		
Practical	<u>1</u> hours / week		11hr
Total			19hr

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA: Faculty bylaws





5-B)) Assessment Tools:

Tool	Purpose (ILOS)
Written examination	To assess knowledge ,understanding, and intellectual
	skills
	2.1.1:2.1.5—2.2.1.,2.2.7—2.3.1,.2.3.4
Oral examination	To assess understanding and stability of knowledge,
	intellectual, , general and transferable.
	2.1.1:2.1.5—2.2.1.,2.2.7—2.3.1,.2.3.4—2.4.1:2.4.6
Practical examination	to assess professional and practical skills, and
	general and ,transferable
	2.3.1,.2.3.4—2.4.1:2.4.6

5-C) **TIME SCHEDULE**: Faculty bylaws

Exam	Week
1- First part:	At the end of the course
- written	
- oral	
- practical & clinical	
2- Assignments & other activities	

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks	
1- First part:			
a- Written	25	50%	
b- Practical	10	20%	
c- Oral	15	30%	
Total	50	100%	

• The minimum passing & Passing grades (Faculty bylaws).

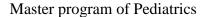
FORMATIVE ASSESSMENT:

Student knows his marks after the Formative exams.

5-E) Examinassions description:

Examination	Description		
First part:	e.g. MCQs, shorts assay, long essay, case reports,		







a- Written	problem solving
b- Practical	e.g. Do, identify
c- Oral	e.g. How many sessions
Total	

6- List of references:

6.1 Course notes

- 1- Handouts updated, administered by staff members
- 2- Museum notebook.
- 3- CDs for histopathological slides and museum specimens are available at the department.

6.2- Essential books (text books)

- Rosai and Ackerman's Surgical Pathology Juan Rosai, Mosby 2004
 Sternberg's Diagnostic surgical Pathology 4^{Ul} edition, Lippincott Williams and Wilkins
- Kumar V , Abbas AK , Fausto N: Robbins and Cotran Pathologic Basis of Disease ,7th ed.;2005, Elsevier Saunders. Available at faculty bookshops & main library.

6.3- Periodicals, Web sites, ... etc

http://www.pathmax.com/ http://www-

medlib.med.utah.edu/WebPath/LABS/LABMENU.html#2

http://www.med.uiuc.edu/PathAtlasf/titlePage.html

http://www.medscape.com/pathologyhome

http://www.gw hyperlink http://umc.edu/dept/path/2

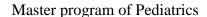
umc.edu/dept/path/2F

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Lecture halls.
- Small group classes
- Laboratory
- Information technology / AV aids
- Data show
- Overhead projector
- Museum specimens
- Projector slides covering available slides in slide box

Course coordinator: Prof.Dr. Hala Adel Agina Head of Department: Prof.Dr.Abdel-lattif El-Balshi







Benha University

Faculty of Medicine

Department of Clinical Pharmacology

Course Specification

Course title: Pharmacology

(Code): **PEDI 601**

Academic Year (2013 - 2014)

- **Department offering the course:** Pharmacology Department
- Major or minor elements of the program: Minor in Pediatrics master program
- Date of specification approval:

- Department council date 7/6/2013.....

A) Basic Information:

• Allocated marks: 50 marks

• Course duration: 15 weeks of teaching

• **Teaching hours: lectures:** <u>15</u> total teaching hours

B) <u>Professional Information</u>:

1- Overall Aim of the Course:

• To provide the advanced knowledge about commonly used groups of drugs affecting different body systems and their implications in therapy of diseases and health promotion.

2- <u>Intended Learning Outcomes (ILOs)</u>:

2.1 Knowledge and understanding:





By the end of the course, students should be able to:

2.1- Knowledge and understanding:

- 2.1.1- Discuss the pharmacokinetic, pharmacodynamic and pharmacotherpeutic
 - properties of different groups of drugs affecting body systems.
- 2.1.2- Discuss the adverse and toxic effects, and their management of commonly used groups interactions.
- 2.1.4- Define clinically relevant age, sex and genetic related variations that affect response
 - to drugs.
- 2.1.5- Discuss the pathophysiology of diseases and explain the rational basis for the use of
 - drugs.

2.2. Intellectual Skills:

By the end of the course, students should be able to:

- 2.2.1- Analyzes the comprehensive drug history of the patient.
- 2.2.2- Correlates drug adverse reactions with clinical data.

2.3. Practical Skills

By the end of the course, students should be able to:

2.3.1- Write rational therapeutic strategies for both acute and chronic conditions that take into account the various variables that influence these strategies. 2.3.2-Select the proper drug(s) for the proper clinical situation in proper dosage.

2.4. General and transferable Skills:

By the end of the course, students should be able to:

- 2.4.1- Demonstrate respect to all patients irrespective of their socioeconomic levels, culture or religious beliefs and use language appropriate to the patient's culture.
- 2.4.2- Provide appropriate basic drug education to the patient and his family.
- 2.4.3- aware the importance of life-long self-learning and show a strong commandment to it.

3- Course contents:





	_	Code	Hours
	Course		
First	1-General pharmacology	PEDI 601	- 1. hour
part	2-Autonomic pharmacology		- 3 hours
	3-CNS pharmacology		- 3 hours
	4-Cardiovascular drugs		- 2 hours
	5-Chemotherpy		- 1. hour
	6-Endocrine pharmacology		-1 hour
	7-Respiratory pharmacology		- 1hour
	8-Gastrointestinal pharmacology		- 1hour
	9-Drugs affecting blood and blood		- 1hour
	forming organs 10-Vitamins & minerals & tonics		- 1 hour
Total			15 hours

4- <u>Teaching and learning methods</u>:

METHODS USED:

4.1 – Lectures

TEACHING PLAN:

Item	Time schedule	Teaching hours	Total hours
Lectures	-1 time/ week	1hours/week for 15	15
	-1hours each	weeks	
Practical			
Total			15

5- Students Assessment methods:

5.A) Attendance Criteria:





- 1. Practical attendance.
- 2. Log book.

5.B) Assessment Tools:

Tool	Purpose (ILOS)			
Written examination	To assess knowledge ,understanding,			
	intellectual ,professional and clinical			
	2.1.1:2.1.5—2.2.1.,2.2.2—2.3.1			
Oral examination	To assess understanding and stability of			
	knowledge, intellectual, professional skills			
	given, attitude and presentation.			
	2.1.1:2.1.5—2.2.1.,2.2.2—2.3.1—2.4.1:2.4.3			

5.C) TIME SCHEDULE:

Exam	Week			
First part exam	After 6 months from registration for MSc.			
	Degree			

5-D) Weighting system:

written exams.	50 %
Oral Examination	40 %
Semester Work	10 %
Other types of Assessment	
Total	100%

FORMATIVE ASSESSMENT:

Student knows his marks after the Formative exams.

5-E) Examinassions description:

First part:





Assessment(1): Written exams. (1hr)

Assessment (2): Oral examination.

6- List of references:

6.1 Essential Books (Text Books):

David E. Golan; Armen H. Tashjian; Ehrin J. and Armstrong et al.(2005): Principles of pharmacology: the pathophysiologic basis of drug [et al.], Philadelphia: Lippincott Williams & Wilkins.

6.2- Recommended Books:

GOODMAN AND OILMAN(2005): THE PHARMACOLOGICAL BASIS OF THERAPEUTICS 11th edition.

6.3- web Sites:

www.micromediex.co

7- Facilities required for teaching and learning:

- Lecture rooms:
- Section rooms
- Audio-visual teaching equipments (Computer, Projector, Videoetc)
- Models and mannequins
- Video tapes, scientific pictures archives.

Course Coordinator: Prof. Dr. Mohaned Mohammed
Head of Department: Prof. Dr. Mohaned Mohammed Ibrahem
Shehab





توصيف مقرر (PEDI 602) Bacteriology Course for Master Degree in Pediatrics Academic Year 2013-2014

مواصفات المقرر:

البرنامج أو البرامج التي يقدم من خلالها المقرر:

Master Degree in PEDI

المقرر يمثل عنصر بالنسبة للبرنامج :الرئيسي

قسم طب الاطفال

القسم العلمي المسئول عن البرنامج:

Bacteriology department

القسم العلمى المسئول عن تدريس المقرر

السنة الدراسية / المستوى:

تاريخ إعتماد توصيف البرنامج

(أ) البيانات الأساسية

المحاضرة: 8 hours الدروس العملية:

المجموع: hours

(ب) البيانات المهنية

١ ـ الأهداف العامة للمقرر:

- 1.1. To educate students about the basic features of general bacteriology, virology, microbial genetics and mycology and to provide students with an understanding of the immune system, its protective functions and its role in the pathophysiology of infectious and non-infectious diseases.
- 1.2. To familiarize students with the common infections and diseases of medical importance, their microbial causes, as well as laboratory diagnosis, treatment, prevention and control of such diseases.
- 1.3. To enable the students to practice the principles infection control.





٢ - النتائج التعليمية المستهدفة للمقرر:
 أ - المعرفة والفهم:

:By the end of the course, the graduates should be able to

- 2.1.1. Illustrate general bacterial morphology, physiology and genetics.
- 2.1.2. Understand the host parasite relationship and microbial pathogenesis.
- 2.1.3. Explain the physiology of the immune system, its beneficial role, its interaction with tumors, its deficiency conditions, as well as its detrimental role in hypersensitivity, autoimmunity and transplant rejection
- 2.1.4. Describe the morphology, culture, antigenic structure and virulence factors of microorganisms of medical importance
- 2.1.5. Recognize the most important skin and venereal infectious conditions and outline the diagnosis, treatment, prevention and control of the most likely organisms causing such diseases
- 2.1.6. Describe the most important methods of decontamination, sterilization and principles of infection control.
- 2.1.7. Describe the basics of antimicrobial chemotherapy and resistance.
- 2.1.8.Understand the impact of molecular technology in microbiology and immunology.

ب - المهارات الذهنية:

:By the end of the course, the graduates should be able to

- 2.2.1. Analyze medically important bacteria based on microscopic examination of stained preparations.
- 2.2.2.distinguish a Gram stain and a Ziehl-Neelsen stain.
- 2.2.3. correlate culture media and biochemical tests commonly used for bacterial identification and distinguish positive and negative results.
- 2.2.4. correlate various sterilization processes and simple infection control measures

جـ - المهارات المهنية والعملية الخاصة بالمقرر:

By the end of the course, the graduates should be able to





- 2.3.1. Diagnose medically important bacteria based on microscopic examination of stained preparations.
- 2.3.2. perform a Gram stain and a Ziehl-Neelsen stain.
- 2.3.3. diagnose culture media and biochemical tests commonly used for bacterial identification and distinguish positive and negative results.
- 2.3.4. perform various sterilization processes and simple infection control measures

د ـ المهارات العامة:

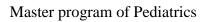
By the end of the course, the graduates should be able to

- 2.4.1. Demonstrate Respect for patients' rights and involve them and /or their caretakers in management decisions.
- 2.4.2. Adopt an empathic and holistic approach to the patients and their problems.
- 2.4.3. Respect the role and the contributions of other health care professionals regardless their degrees or rank (top management, subordinate or colleague).
- 2.4.4. Conduct counseling sessions for prevention & control of different conditions for healthy individuals, for patients as well as their families.

١ ٣ ـ ـ محتوى المقرر:

Subject	Lectures (hrs)	Small groups discussion (hrs)	Total (hrs)
Introduction to Microbiology Bacterial Cell Structure Disinfection and Sterilization	0. 5	1	1.5
Staphylococci , streptococci, and Neisseria Pneumococci Corynebacteria Bacillus Group & Clostridium	0.5	3	3.5
Mycobacteria, Gram negative bacilli	1	3	4

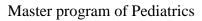






except campylobacter,H.pylori) & Gram negative small rods (all except moraxella, and in Haemophilus only Haemophilus influenza)			
Spirochaetes, Mycoplasma, Rickettsia Chlamydia, Coxilla, Legionellae pneumophila &Listeria	1		1
Gram negative bacilli(except campylobacter,H.pylori)			
Anaerobic gram negative bacilli			
Anaerobic gram negative cocci			
Applied Microbiology: <u>(meningitis, respiratory tract infection, urinary tract infection, Bacterial food poisoning, water borne diseases, milk borne diseases, Hospital acquired infections, diseases transmitted from the mother to the fetus).</u>	1		1
Cells of immune response.			
Natural &acquried immunity.			
Immune response.			
Antigens, antibodies ,complement			
cytokines.	1	2	3
Cell mediated immunity	1		
MHC			
Apoptosis &necrosis			
Superantigen			







	I		
General virology			
– Structure			
 Lab. Diagnosis (idea) 			
 Viral replication (idea) 			
 Antiviral chemotherapy 	1	2	3
 Antiviral immunity 			
 Pathogenesis of viral diseases 			
 viral vaccines 			
Herpesviruses			
Adenoviruses			
<u>Picorna viruses</u>			
<u>Rabies Virus</u>	1		1
<u>Arboviruses</u>			
<u>Coronaviruses</u>			
Orthomyxoviruses & Paramyxoviruses			
human immunodeficiency virus (HIV)	1		1
hepatitis Viruses			
Total	8hs	11hrs	19hs

4- أساليب التعليم والتعلم:

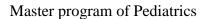
- 1. Lectures.
- 2. Practical classes
- 3. Small group discussion with case study and problem solving.
- 4. Assay (using library & internet)

٥ ـ أساليب تقييم الطلاب

5-A) <u>ATTENDANCE CRITERIA</u>:

1. Log book







5-B)) Assessment TOOLS:

Tool	Purpose (ILOS)		
Written examination	To assess knowledge ,understanding, intellectual		
	professional and clinical		
	2.1.1:2.1.8—2.2.1.:2.2.4—2.3.1,.2.3.4		
Oral examination	To assess understanding and stability of knowledge,		
	intellectual, professional skills given, attitude and		
	presentation.		
	2.1.1:2.1.8—2.2.1.:2.2.4—2.3.1,.2.3.4—2.4.1:2.4.4		

5-C) TIME SCHEDULE:

Exam	Week
- Final exam	at (May or September)

النسبة المئوية لكل تقييم:

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
- Final exam: a- Written	25	50%
b- Oral	25	50%
Total	50	100%

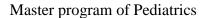
- Passing grades are: EXCELLENT >85%, VERY GOOD 75- <85%, GOOD 65- <75% and FAIR 60-<65%.

FORMATIVE ASSESSMENT:

• Student knows his marks after the Formative exams.

5-E) Examination description:







Examination	Type	Description
Final Examination	1. Written	A three-hour written paper composed of short essay-type questions and Case study
	2. Oral	One oral examination station with 2 staff members (10-15 minutes: 4-5 questions)

6 ـ قائمة المراجع

6.1- Essential books (text books):

- 1. Jawetz, Melnick and Adelberg's *Medical Microbiology 26th Edition* . 2013 by The McGraw-Hill Companies, Inc
- 2. Mackie & McCartney Practical Medical Microbiology. 14e(hb)2008by ELSEVIER PRIVATE LIMITED INDIA. ISBN:9788131203934
- 3. Abul K. Abbas, Andrew H. Lichtman, shiv pillai. Cellular and molecular immunology, Updated 7th ed. 2012.ISBN 9780323222754

6.2- Recommended books:

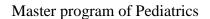
- 1. Richard A Harvey, Pamela C Champe, Bruce D Fisher (2007):Lippincott,s illustrated review microbiology and parasitology, Lippincott Williams & Wilkins ISBN: 0781782155
- 2. Bonnie A. B, Lauritz A. J (2009): Lippincott's Illustrated Q&A Review of Microbiology and Immunology by Lippincott Williams & Wilkins

 1st ed. SBN-13: 978-1582558578

6.3- Periodicals, Web sites, etc:

- 1. asmnews@asmusa.org
- 2. http://www.phage.org/black09.htm
- 3. http://www.microbe.org/microbes/virus or bacterium.asp
- 4. http://www.bact.wisc.edu/Bact330/330Lecturetopics
- 5. http://whyfiles.org/012mad_cow/7.html
- 6. http://www.microbelibrary.org
- 7. http://www.hepnet.com/hepb.htm
- 8. http://www.tulane.edu/~dmsander/Big_Virology/BVHomePage.html
- 9. http://www.mic.ki.se/Diseases/c2.html
- 10. http://www.med.sc.edu:85/book/welcome.htm
- 11. http://www.bioiogy.arizona.edu/immunology/microbiology_immunology.html







٧ - الإمكانيات المطلوبة للتعليم والتعلم

Facilities used for teaching this course include:

- Department lectures halls: 1

- Department Equipped Laboratories :2

تاريخ إعتماد توصيف البرنامج:

أستاذ المادة: رئيس القسم:

Prof. Wafaa Al Shafei Prof. Waffa Al Shafei





Benha University

Faculty of Medicine

Department of Paediatrics

Course Specifications

Course title: PAEDIATRICS

Code: PEDI 604

Academic Year (2013 - 2014)

- Department offering the course: Pediatric Department
- Major or minor elements of the program: Major.
- Date of specification approval:
 - Department council date: 7/6/2013.....

a) Basic Information:

- **Allocated marks:** 400 marks.
- Course duration: 48 weeks of teaching.
- **Teaching hours:** 720 total teaching hours (240h lectures + 480 practical)

B) Professional Information:

1- Overall Aim of the Course:

- 1.1.To provide candidates with the background knowledge of academic basis of pediatrics including embryology, physiology, biochemistry, pharmacology, microbiology, immunology and pathology.
- 1.2.To provide candidates with the knowledge and skills necessary to practice clinical pediatrics
- 1.3.To provide candidates with the knowledge and skills necessary to practice neonatal medicine





- 1.4.To provide candidates with the knowledge and skills necessary to practice child health
- 1.5.To provide candidates with the knowledge and skills necessary to comprehend and apply clinical genetics
- 1.6.To provide candidates with the communication skills and attitudes towards patient care and ethics of treatment and research.
- 1.7.To provide candidates with the skills necessary to interpret and practice basic research in pediatrics
- 1.8.To give graduate ability to acquire the competence and meet the need of our local community and respond appropriately to cultural and medical needs.

2- Intended Learning Outcomes (ILOs):

2-1 Knowledge and understanding:

By the end of the course, students should be able to:

- 2.1.1 *Distinguish* the physiological, developmental, microbiologic, pathological and biochemical basis of neonatal and pediatric diseases
- 2.1.2 *Recognize* the normal function of the body in different pediatric age group.
- 2.1.3 *Describe* the etiology and types of diseases of various systems included in the neonatal and pediatric medicine and their drug therapy.
- 2.1.4 *Highlight* the differential diagnosis of the different clinical presentations among neonates and children.
- 2.1.5. *Identify* the basic and updated data in different pediatric branches
- 2.1.6. *Categorize* different pediatric emergencies.
- 2.1.7. *Identify* basic and advanced knowledge in Pediatrics and related sciences.
 - 2.1.8 *Identify* the basic principles and practice of scientific research.

2.2. Intellectual Skills:

By the end of the course, students should be able to:





- 2-2-1 Analyze cases presenting with different medical problems
- 2-2-2 *Interpret* medical history, clinical data and diagnostic findings to reach to proper diagnosis and treatment.
 - 2-2-3 *Solve* different clinical problems in neonatal period and early infancy.
- 2-2-4 Differentiate between different pediatric diseases to reach diagnosis.
 - 2-2-5 *evaluate* clinical data of the patients
- 2.2.6. Design and carry out research in different era of science related to pediatric diseases.
- 2.2.7. *Interpret* of different data to detect the point of weakness and strength.
 - 2.2.8. Recognize evidence based learning and practice.
 - 2.2.9. Plan to improve professional performance in heath field
 - 2.2.10. *Formulate* the data to detect points of strength and weakness.

2-3 Practical and Clinical skills:

By the end of the course, students should be able to:

- 2.3.1 *Manage* cases problem in clinical neonatology and pediatric medicine.
- 2.3.2. *Identify* the presentation of different genetics problems and child health
 - 2-3-3 *Manage* cases presenting with different medical problems in different pediatric age groups
 - 2-3-4 *Evaluate* the knowledge acquired in the various systems and diseases to analyze and diagnose different conditions.
 - 2-3-5 *Apply* basic procedures for patients in pediatric intensive care as well as outpatients
 - 2-3-6 *Design* and evaluate management plan of patients.
 - 2.3.7 *Take* proper medical history of newborn, neonate, child and adolescent
 - 2.3.8 *Perform* basic procedures for acutely and chronically ill pediatric patients in general wards.

2.4. General and transferable Skills:

By the end of the course, students should be able to:

2.4.1. *Recognize* the legal and ethical aspects in pediatric.



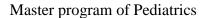


- 2.4.2. Respects rights of patients and their families to full understanding, and involve them in management decision.
- 2.4.3. *Communicate* clearly and effectively with patients and their family members with respect to them,
- 2.4.4. *Explain* to the patients and their families the nature of illness, and the management plan to understand treatment options in easy way.
 - 2.4.5. *Cope up* with difficult situations as breaking news.
- 2.4.6. *Demonstrate* competence in problem solving
- 2.4.7. *Develop* personal career and put development plan.
- 2.4.8 *Use* different sources of data and knowledge
- **2.4.9.** *Work* in one team and deal with proper time with respect to colleagues and all members of the health profession.
- 2.4.10.*Use* different sources to get different knowledge by themselves in different types of the diseases
- 2.4.11. *Evaluate* himself and the others and learn the update in diagnostic and therapeutic protocols of pediatric diseases and emergency.

4- Course content

Theoretical Drestical bus		
TOPIC	Theoretical hrs	Practical hrs
Immunology, allergic rheumatic diseases	25	25
2. Nephrology	25	28
3. Cardiology	25	28
4. Respiratory system	25	28
5.	25	28
Hematology/Oncology		
6. Emergency and acutely	25	25
ill child, fluid therapy		
7. Endocrinology	25	25
8. Neurology	25	25
Gastroenterology and Hepatology	25	28







10.	Behavioral and	15	
soci	ial Pediatrics		
	TOTAL	(240)100%	(240)100%

III.A) TOPICS:

The field of pediatrics: Overview of Pediatrics, Ethics in pediatric care, Preventive pediatrics.

The Immunologic System and Disorders

The Child with Suspected Immunodeficiency, Primary B-Cell Diseases, Primary T-Cell Diseases, Combined B- and T-Cell Diseases, Disorders of Phagocyte Function, Leukopenia, Leukocytosis, Disorders of the Complement System, Graft-versus-Host Disease

Allergic Disorders

Allergy and the Immunologic Basics of Atopic Disease, Principles of Treatment, Allergic Rhinitis, Asthma, Atopic Dermatitis, Urticaria-Angioedema, Anaphylaxis, Serum Sickness, Adverse Reactions to Drugs, Insect Allergy, Ocular Allergies,: Adverse Reactions to Foods, drugs

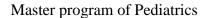
Rheumatic Diseases of Childhood

Evaluation of the Patient with Suggested Rheumatic Disease, Treatment of Rheumatic Diseases, juvenile Rheumatoid Arthritis,
Spondyloarthropatbies, Post-infectious Arthritis and Related
Conditions, Systemic Lupus Erythematosus Juvenile Dermatomyositis,
Scleroderma, Kawasaki Disease, Vasculitis Syndromes, pain syndromes

The Digestive System

Clinical Manifestations of Gastrointestinal Disease







Normal Digestive Tract Phenomena, Major Symptoms and Signs of Digestive Tract Disorders, Stomach and Intestines

Pyloric Stenosis and Other Congenital Anomalies of the Stomach,
Intestinal Artesia, Stenosis, and Malrotation, Motility Disorders and Hirschsprung Disease, Ileus, Adhesions, Intussusception, and Closed-Loop Obstructions, Anorectal Malformations, Inguinal Hernias

The Oral Cavity
Cleft Lip and Palate, Dental Caries,

Peritoneum

Peritonitis, Diaphragmatic hernia

The Esophagus

Atresia and Tracheoesopbageal Fistula, Gastroesopbageal Reflux

.achalesia

Exocrine Pancreas: Pancreatitis

The liver and Biliary System

Cholestasis, Metabolic Diseases of the Liver, Autoimmune (Chronic)
Hepatitis, Drug- and Toxin-Induced Liver Injury, Fulminant Hepatic
Failure, Portal Hypertension and Varices, cirrhosis, metabolic liver
disease, mitochondorial hepatopathies, disease of billiary system, liver
transplantation.

The Respiratory System

Development and Function Respiratory Pathophysiology,





Upper Respiratory Tract

Congenital Disorder of the Nose Acquired Disorders of the Nose,
Infections of the Upper Respiratory Tract, Tonsils and Adenoids,
Obstructive Sleep Apnea and Hypoventilation in Children, FB, Neoplasm,
polyps

Lower Respiratory Tract

Acute Inflammatory Upper Airway Obstruction, Foreign Bodies in the Larynx, Trachea, and Bronchi, Bronchitis, Broncbiolitis, Aspiration Pneumonias and Gastroesopbageal Reflux-Related Respiratory Disease,: Hypersensitivity to Inhaled Materials, Pulmonary Hemosiderosis (Pulmonary Hemorrhage), Atelectasis, Chronic or Recurrent Respiratory Symptoms, Cystic Fibrosis,

Disease of the Pleura Pneumothorax, effusion, tumors

Pulmonary system in systemic disease

Respiratory failure

The Cardiovascular System

Developmental Biology of the Cardiovascular System

Cardiac Development and the Transition from Fetal to Neonatal

Circulations,

Evaluation of the Cardiovascular System

History and Physical Examination and Laboratory Evaluation,

Congenital Heart Disease





Evaluation of the Infant or Child with Congenital Heart Disease, General Principles of Treatment of Congenital Heart Disease,

Cardiac Arrhythmias

Disturbances of Hate and Rhythm of the Heart,

Acquired Heart Disease

Infective Endocarditis, Rheumatic Heart Disease,

Disease of the Myocardium and Pericardium

Disease of the Myocardium,

Cardiac Therapeutics

Heart Failure,

Disease of the Peripheral Vascular System

Systemic Hypertension,

Disease of the Blood

The Hematopoietic System

The Anemias, Anemias of Inadequate Production

Physiologic Anemia of Infancy, Megaloblastic Anemias, Iron Deficiency

Anemia,

Hemolytic Anemias

Definitions and Classifications of Hemolytic Anemias, Hereditary

Spherocytosis, Hemoglobin Disorders,

Polycythemia (Erythrocytosis)

Secondary Polycythemia,

The Pancytopenias

The Constitutional Pancytopenias, the Acquired Pancytopenias,





Hemorrhagic and Thrombotic Diseases

Hemostasis, Hereditary Clotting Factor Deficiencies (Bleeding Disorders), Von Willebrand Disease, Hereditary Predisposition to Thrombosis, Disseminated Intravascular Coagulation (Consumptive Coagulopathy) Disorders of the Platelets and the Blood Vessels.

The Spleen and Lymphatic System Splenomegaly, Lymphadenopathy,

Neoplastic Disease and Tumors

Principles of Diagnosis, Principles of Treatment, the Leukemias,

Lymphoma, Neuroblastoma, Neoplasms of the Kidney.

Nephrology

Glomerular Disease

Introduction to Glomerular Diseases,

Conditions Particularly Associated with Hematuria

Clinical Evaluation of the Child with Hematuria, Recurrent Gross

Hematuria, Gross Microscopic Hematuria, Hemolytic-Uremic Syndrome,

Conditions Particularly Associated with Proteinuria

Non pathologic Proteinuria, Pathologic Proteinuria, Nephrotic Syndrome,

Tubular Disorders, Renal Tubular Acidosis,

Toxic Nephropathies—Renal Failure

Urologic Disorders in Infants and Children

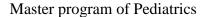
Urinary Tract Infections, Vesicoureteral Reflux, Voiding Dysfunction,

Anomalies of the Penis and Urethra, Disorders and Anomalies of the

Scrotal Contents,

The Endocrine System







Disorders of the Hypothalamus and Pituitary Gland

Hypopituitarism, Diabetes Insipidus, Disorders of Pubertal Development,

Disorders of the Thyroid Gland

Hypothyroidism, Thyroiditis, Goiter, Hyperthyroidism,

Disorders of the Parathyroid Glands

Hypo-parathyroidism, Hyperparathyroidism,

Disorders of the Adrenal Glands

Adrenocortical Insufficiency, Adrenal Disorders and Genital

Abnormalities,

Disorders of the Gonads

Hypofunction of the Testes, Hypofunction of the Ovaries,

Diabetes Mellitus in Children

The Nervous System

Congenital Anomalies of the Central Nervous System, Seizures in Childhood,

Headaches, Movement Disorders, Encephalopathies, Neurodegenerative

Disorders of Childhood, Brain Tumors in Children,

Neuromuscular Disorders

Evaluation and Investigation, Developmental Disorders of Muscle, Muscular

Dystrophies, Guillian-Barre Syndrome

Neuropathies

The Ear

Hearing Loss, Disease of the External Ear, Otitis Media and Its

Complications.

The Skin

Eczema, Cutaneous Bacterial Infections, Acne.





Orthopedic Problems

Evaluation of the Child, the Knee, the Hip, the Spine, the Neck,

Sports Medicine

Management of Musculoskeletal Injury, Head and Neck Injuries,

Skeletal Dysplasia

General Considerations in Disorders of Skeletal Development

Psychological Disorders

Psychiatric Considerations of Central Nervous System Injury, Psychosomatic Illness, Vegetative Disorders, Habit Disorders, Anxiety Disorders, Mood Disorders, Suicide and Attempted Suicide, Disruptive Behavioral Disorders, Sexual Behavior and Its Variations, Pervasive Developmental Disorders and Childhood Psychosis, Psychologic Treatment of Children and Adolescents, Neuro-developmental Dysfunction in the School-Aged Child

The Acutely Ill Child

Evaluation of the Sick Child in the Office and Clinic, Injury Control, Emergency Medical Services for Children, and Child; Scoring Systems, Stabilization of the Critically III Child, Acute (Adult) Respiratory Distress Syndrome, Drowning and Near-Drowning, Burn Injuries, Cold Injuries Anesthesia and Preoperative Care, Pain Management in Children,

Metabolic Diseases

An Approach to Inborn Errors of metabolism, defects in metabolism of AA, lipids and proteins ,MPS, PORFERIA and porgeria

Special Health Problems during Adolescence





The Epidemiology of Adolescent Disease, Depression, Suicide,: Violent Behavior, Anorexia Nervosa and Bulumia, Substance Abuse, The Breast, Menstrual Problems, Contraception, Pregnancy, Sexually Transmitted Diseases,

Unclassified Diseases

Sudden Infant Death Syndrome

Environmental Health Hazards

Lead Poisoning, Poisonings: Drugs, Chemicals, and Plants.

III.B) Tutorial / Small Group Discussions

- 5-) Clinical rounds
- 2- Clinical grand conference

III.C) PRACTICAL CLASSES:

- 5. Clinical rounds
- 6. Demonstrated and Supervised Procedures
- 7. Supervised outpatient and inpatient care
- 8. Clinical conferences

4- <u>Teaching and learning methods</u>:

METHODS USED:

- 1. Modified Lectures
- 2. Small group discussions
- 3. Training Workshops
- 4. Clinical rounds
- 5. Seminars, scientific conferences and symposiums
- 6. learning online.

TEACHING PLAN:

Lectures: Division of students into <u>2</u> groups 2/week, Time from <u>10</u> to <u>1:30</u>.

Tutorials:





Practical classes

Time plan:

Item	Time schedule	Teaching hours	Total hours
Lectures	<u>2</u> times/week;	2X2.5 h = 5h	5 x 48
	2.5 hour for each		wks=240hrs
Practical	5hours / week	5	5x 48 = 240
			hrs
Seminars	3hours / week	3	3x48 = 144 hrs
Small groups	<u>2h/w</u>	2	2x 48 = 96hrs
Total		15	720 hrs

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA: Faculty bylaws

5-B) Assessment TOOLS:

Tool	Purpose (ILOs)	
Written examination	To assess knowledge, problem solving attitudes and	
	skills through essay and MCQs 2.1.1:2.1.8	
	2.2.1:2.2.92.3.1:2.3.8	
Oral examination	To assess knowledge and attitudes and self	
	confidence 2.1.1:2.1.82.2.1:2.2.92.3.1:2.3.8	
	2.4.1:2.4.11	
Clinical examination	To asses clinical skills through 2 short cases and	
	one long case2.3.1:2.3.82.4.1:2.4.11	
Practical examination	Through audiovisual presentations to assess	
	attitudes and skills and abilities 2.3.1:2.3.8	
	2.4.1:2.4.11	

5-C) TIME SCHEDULE: Faculty bylaws

Exam	Week
1- Final written exam	48
2- Final clinical exam	49





3- Thesis dissertation submission	72 -73

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
- Final exam:		
a- Written Pediatrics	200	50%
child health		
b- Practical clinical		
pediatrics(long+2short)	160	40%
0.15.11.1	4.0	100/
c- Oral Pediatrics	40	10%
Total	400	100%
= 5 002	- 3 0	_ 5 5 7 6

The minimum passing & Passing grades (Faculty bylaws) (
 50% for written and 50% for clinical and oral and for overall)

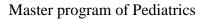
FORMATIVE ASSESSMENT:

Student knows his marks after the Formative exams.

5-E) Examinations description:

Examination	Description		
- Final exam:	a-Short essay questions		
a- Written	b- Problem solving case studies, MCQs.		
b- Practical,	- Do clinical examination for 2 short cases and one long		







clinical	case	
c- Oral	c- i- Identify the diagnostics modalities in clinical pediatrics (X-ray and lab spots)	
	c-ii— discusses with candidate their knowledge in clinical pediatric topics.	
- Assignments & other activities	-Complete log practical books for training, procedures and scientific activities	
	-Complete research work	

6- <u>List of references</u>:

6.1- Essential books (text books):

- **6.1-1** Nelson Textbook of Pediatrics; Behrman RE, Kliegman RM, Jenon, HB; Elsevier Science; 19^h edition, 2011
- **6-1-2** Forfar & Arneill's Textbook of Pediatrics :McIntosh, N., Helms, P., Smyth, R. and Logan, S. (eds.). 7th edition, Churchill Livingston, Edinburgh, 2008. ISBN 978-0443103964
- **6.1.3** Pediatric clinics of North America, Each bimonthly issue .Elsevier.
- **6.1.4.** Recent advances in pediatrics. Elsevier ISBN: 9789380704005

6.2- Recommended books:

6-3-1 MRCPCH Master Course in Child Health by Malcolm Levene

6-3-2 Internet resources





6.3- <u>Periodicals, Web sites, ... etc</u>: Disseminated on pediatric department website

www.benhapediatrics.com MD Consult, e medicine Medscape

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Lecture rooms in pediatric department
- Small group classes in clinical wards and staff rooms
- Information technology / AV aids on computer in department and faculty
- Skill lab

Course coordinator: Prof .Iman Abdelraheim, Dr. Ghada Saad

Head of dept: Prof. Dr. Mohamed ElBakry

Updated 1/9/2013





Benha University Faculty of Medicine Department of Paediatrics

Course Specifications

Course title: Child Health and Neonatal care

Code: PEDI 606 Academic Year (2013 - 2014)

• Department offering the course: Pediatric Department

• Major or minor elements of the program: Major.

• Date of specification approval: - Department council No. (169) date: 3/9/2013

A) Basic Information:

• Allocated marks: 200 marks.

• Course duration: 48 weeks of teaching.

• **Teaching hours:** 45h **lectures** + 90 hrs **practical**

B) Professional Information:

1- Overall Aim of the Course:

- 1-1 To equip candidates with the background knowledge of academic basis of pediatrics including embryology, physiology, biochemistry, pharmacology, microbiology, immunology and pathology.
- 1-2 To equip candidates with the knowledge and skills necessary to practice neonatal medicine
- 1-3 To equip candidates with the knowledge and skills necessary to practice child health
- 1-4 To equip candidates with the communication skills and attitudes towards patient care and ethics of treatment and research





1-5 To produce physician who are better prepared to understand, reflect and meet the need of our local community and respond appropriately to cultural and medical needs.

2- <u>Intended Learning Outcomes (ILOs)</u>:

2-1 **Knowledge and understanding:**

By the end of the course, students should be able to:

- 2-1-1 *Distinguish* the physiological, developmental, microbiologic, pathological and biochemical basis of neonatal and pediatric diseases
- 2-1-2 *Recognize* the etiology and types of diseases under the different systems included in the neonatal medicine
- 2-1-3 . *Illustrate* types of diseases of various systems included in the neonatal medicine and child health.
- 2-1-4 List the differential diagnosis of the different clinical presentations among neonates.

2.2. Intellectual Skills:

By the end of the course, students should be able to:

- 2-2-1 Analyze cases presenting with different medical problems (nutrition, developmental.....etc).
- 2-2-2 *Interpret* data and point of weakness and strength of the present data.
- 2-2-3 Recognize between different neonatal diseases and during infancy to reach diagnosis and interpret clinical and diagnostic findings.
 - 2-2-4 Solve cases problem in clinical neonatology and child health.

2-3, Practical and Clinical skills:

By the end of the course, students should be able to:

- 2-3-1 Predict clinical and diagnostic findings to reach a founded diagnosis
- 2-3-2 *Manage* cases in clinical neonatology and child health care field
- 2-3-3 *Apply* basic procedures for care of neonates in intensive care as well as outpatients.
- 2-3-4 Perform problem solving and case study.





- 2-3-5 Make decisions according to situations of the patient.
- 2.3.6 perform basic vaccination skills and developmental assessment

2.4. General and transferable Skills:

By the end of the course, students should be able to:

- 2.4.1.Recognize the legal and ethical aspects in pediatric.
- 2.4.2. **Learn** the update in diagnostic and therapeutic protocols of neonatal disease and emergency
- **2.4.3.** *Use* different sources of data and knowledge in different types of the diseases.
- 2-4-4 Communicate with patients at all ages and their family members and care-givers
- 2-4-5 Respect the rights of patients and their families to full understanding, choices and consent to management plan
- 2-4-6 Communicate effectively with individuals regardless of their social, cultural, ethnic backgrounds, or their disabilities.
- 2-4-7 Work effectively as a member or a leader of an interdisciplinary team.

2- Course contents:

		Theoretical hrs	Practical hrs		
	TOPIC				
1	Neonatology	35	17		
2	Growth and Development	20	10		
3	Nutrition	20	10		
4	infection and parasitic diseases	10	5		
5	Preventive medicine	4	3		
TOTAL		(90)100%	(45)100%		





III.A) TOPICS:

Growth and Development

Overview and Assessment of: Variability, Fetal Growth and Development. The Newborn, The First year, The Second Year, The Preschool Years, Early School Years, Adolescence, Assessment of Growth and Development.

Social Issues

Adoption, Foster Care, Child Care, Separation and Death, Impact of Violence on Children, Abuse and Neglect of Children

Children with Special Health Needs

Failure to Thrive, Developmental Disabilities and Chronic Illness: An Overview, Pediatric Palliative Care: The Care of Children with Life-Limiting Illness, Children at Special Risk.

Nutrition

Nutritional Requirements, the Feeding of Infants and Children, 'Malnutrition, Obesity, Vitamin Deficiencies and Excesses

Pathophysiology of Body Fluids and Fluid Therapy
Water, Sodium, Potassium, Chloride, Calcium, Magnesium, Phosphorus,
Hydrogen Ion, Fluid Therapy, Principles of Therapy, Electrolyte
Treatment of Specific Disorders,

The Fetus and the Neonatal Infant

Noninfectious Disorders





Overview of Mortality and Morbidity, The Newborn Infant, High-Risk Pregnancies, The High-Risk Infant, Clinical Manifestations of Diseases in the Newborn Period, Birth Injury, Delivery Room Emergencies, Respiratory Tract Disorders, Digestive System Disorders, Blood Disorders: The Umbilicus, Metabolic Disturbances, The Endocrine System, dysmorfology and infections

Infections in Neonatal Infants
Pathogenesis and Epidemiology and Clinical Syndromes.

<u>Infectious Diseases</u>

General Considerations Fever.

Gram-Positive Bacterial Infections
Staphylococcal Infections, Streptococcus pneumoniae (Pneumococcus)
Infection, Group A Streptococcus Infection, Group B Streptococcus
Infection.

Gram-Negative Bacterial Infections

Neisseria meningitidis (Meningococcus) Infection, Neisseria gonorrhoeae (Gonococcus) Infection, Haemophilus influenzae Infection, Pertussis (Bordetella pertussis and B. parapertussis), Salmonella, Shiglla Escherichia coli Infection, Pseudomonas Infection,

Anaerobic Bacterial Infections
Botulism, Tetanus.
Mycobacterial Infections

Tuberculosis.

Spirochetal Infections
Syphilis (Treponema pallidum),





Lyme disease (Borrelia burgdorferi),

Mycoplasmal Infections

Mycoplasma pneumoniae Infection, Chlamydial Infections, Chlamydia pneumoniae Infection.

Mycotic Infections

Candida Infection

Viral Infections

Measles, Rubella,

Mumps, Enterovirus

Infection, Herpes Simplex Virus

Infection, Varicella-Zoster Virus Infection, Epstein - Barr virus Infection, Roseola (Human Herpesvirus Types 6 and 7), Respiratory Syncytial Virus Infection, Adenovirus Infection, Rotavirus and Other Agents of Viral Gastroenteritis, Acquired Immunodeficiency Syndrome (Human Immunodeficiency Virus Infection)

Protozoan Diseases

Giardiasis, Tricbomoniasis, Malaria (Plasmodium), Toxoplasmosis (Toxoplasma gondii),

Helminthic Diseases

Ascariasis (Ascaris lumbricoides), Enterobiasis (Pinworm; Enterobius Vermicularis).

Preventive Measures

Immunization and vaccination Practices

III.B) <u>Tutorial / Small Group Discussions</u>

- 1- Clinical grand conference
- 2- Work shop





III.C) PRACTICAL CLASSES:

- 1. Clinical conferences
- 2.Demonstrated and Supervised Procedures

4- Teaching and learning methods:

METHODS USED:

- 1. Lectures
- 2. Training Workshops
- 3. Clinical conferences
- 4. .Seminars, scientific conferences.

TEACHING PLAN:

Lectures: Division of students into 3 groups

1/week, time from 10 to 1p.m.

Tutorials:

Practical classes

Time plan:

Item	Time schedule	Teaching hours	Total hours
Lectures	<u>1</u> times/week;	1X1 h =1h	1 x 45
	1 hour for each		wks=45hrs
Practical	2hours / week	2	2x 45 = 90hrs
Total		3	135 hrs

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA: Faculty bylaws

5-B) Assessment TOOLS:

Tool	Purpose (ILOs)
Written examination	To assess knowledge, problem solving attitudes and





	skills through essay and MCQs 2.1.1:2.1.4 2.2.1:2.2.42.3.1:2.3.6
Oral examination	To assess knowledge and attitudes and self
	confidence 2.1.1:2.1.42.2.1:2.2.42.3.1:2.3.6
	2.4.1:2.4.7
Clinical examination	To asses clinical skills through 2 short cases and
	one long case 2.3.1:2.3.62.4.1:2.4.7
Practical examination	Through audiovisual presentations to assess
	attitudes and skills and abilities 2.3.1:2.3.6
	2.4.1:2.4.7

5-C) TIME SCHEDULE: Faculty bylaws

Exam	Week
1- Final written exam	48
2- Final clinical exam	49

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
- Final exam:		
a- Written		
Child health and	100	50%
Neonatal care		
b- OSCE	100	50%
Total	200	100%

The minimum passing & Passing grades (Faculty bylaws). (
 50% for written and 50% for clinical and oral and for overall)

FORMATIVE ASSESSMENT:

Student knows his marks after the Formative exams.





5-E) Examinations description:

Examination	Description
- Final exam: a- Written	a-Short essay questions b- Problem solving case studies, MCQs.
b- OSCE	i- Identify the clinical diagnostics modalities in clinical neonatology
	ii- Identify clinical problems in child health and neonatology (spots session)
3- Assignments & other activities	-Complete log practical books for training, procedures and scientific activities

6- <u>List of references</u>:

- 6.1- Essential books (text books):
 - **6.1-1** Nelson Textbook of Pediatrics; Behrman RE, Kliegman RM, Jenon, HB; Elsevier Science; 19^h edition, 2011
- **6-1-2** Forfar & Arneill's Textbook of Pediatrics :McIntosh, N., Helms, P., Smyth, R. and Logan, S. (eds.). 7th edition, Churchill Livingston, Edinburgh, 2008. ISBN 978-0443103964
- **6.1.3** Pediatric clinics of North America, Each bimonthly issue .Elsevier.
- **6.1.4.** Recent advances in pediatrics. Elsevier ISBN: 9789380704005

6.2- Recommended books:





6-2-1 MRCPCH Master Course in Child Health by Malcolm Levene

6-2-2 Internet resources

6.3- <u>Periodicals, Web sites, ... etc</u>: Disseminated on pediatric department website, MD Consult, e medicine Medscape

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Lecture rooms in pediatric department
- Small group classes in clinical wards and staff rooms
- Information technology / AV aids on computer in department and faculty
- Skill lab

Course coordinator: Prof .Iman Abdelraheim,
Head of dept: Prof. Dr. Mohamed ElBakry
Updated 7/6/2013





Benha University

Faculty of Medicine

Department of Paediatrics

Course Specifications

Course title: Genetics

Code: PEDI 605

Academic Year (2013 - 2014)

- Department offering the course: Pediatric Department
- Major or minor elements of the program: Major.
- Academic levels: Second part.
- Date of specification approval:
 - Department council date: 7/6/2013......

A) Basic Information:+

- Allocated marks: 50 marks.
- Course duration: 48 weeks of teaching.
- **Teaching hours:** 15hr lectures +45hr practical

B) Professional Information:

1- Overall Aim of the Course:

- 1-1 To equip candidates with the background knowledge of academic basis of pediatrics including embryology, physiology, biochemistry, pharmacology, microbiology, immunology and pathology.
- 1-2 To equip candidates with the knowledge and skills necessary to practice clinical pediatrics
- 1-3 To equip candidates with the knowledge and skills necessary to comprehend and apply clinical genetics





- 1-4 To equip candidates with the communication skills and attitudes towards patient care and ethics of treatment and research
- 1-5 To produce graduate able to acquire the competence and, reflect and meet the need of our local community and respond appropriately to cultural and medical needs.
- 1-6 To produce physician who are better prepared to understand, reflect and meet the need of our local community and respond appropriately to cultural and medical needs.

2- Intended Learning Outcomes (ILOs):

2-1 Knowledge and understanding:

By the end of the course, students should be able to:

- 2-1-1 *Distinguish* the physiological, developmental, microbiologic, pathological and biochemical basis of genetic diseases
- 2-1-2. **Recognize** the basic and updated data in different pediatric branches
- 2-1-3. *Identify* the different genetic problems in the pediatric age

2.2. Intellectual Skills:

By the end of the course, students should be able to:

- 2-2-1 Analyze cases presenting with different medical problems.
- 2-2-2 Analyze data and point of weakness and strength of the present data.
- 2-2-3 Recognize between different pediatric diseases to reach diagnosis and interpret clinical and diagnostic findings.
 - 2-2-4Solve genetics problem in clinical cases .
- 2-2-5Design and carry out research and critically evaluate research findings

2-3Practical and Clinical skills:

By the end of the course, students should be able to:

- 2-3-1 *interpret* cases presenting with different genetic problems
- 2-3-2 **Combine** clinical and diagnostic findings to reach a founded diagnosis
- 2-3-3 *Manage* cases in clinical genetics





- 2-3-4 Diagnose different pediatric diseases to reach diagnosis.
- 2-3-5 Make decisions according to situations of the patient.

2.4. General and transferable Skills:

By the end of the course, students should be able to: 2.4.1.Recognize the legal and ethical aspects in pediatric genetics.

- 2.4.2 **Learn** the update in diagnostic and therapeutic protocols of pediatric genetic diseases.
- **2.4.3.** *Use* different sources of data and knowledge in different types of the diseases.
- 2.4.4.Communicate with patients at all ages and their family members and care-giver
- 2-4-5 Respect the rights of patients and their families to full understanding, choices and consent to management plan
 - 2-4-6 Communicate effectively with individuals regardless of their social, cultural, ethnic backgrounds, or their disabilities.
 - 2-4-7 Work effectively as a member or a leader of an interdisciplinary team.

3- Course contents:

ТОРІС	Theoretical hrs	Practical hrs
1-Molecular Diagnosis of Genetic Diseases	1	3
2-Integration of genetics into pediatric practice	1	3
3- Genetic counseling	1	3
4- Management and treatment of genetic disorders	1	3
5-Genetic approach in pediatric medicine	1	3





6-Human genome	1	3
7-Pattern of genetic transmission	1	3
8-Cytogenetics	1	3
9-Methods of chromosomal analysis	1	3
10- Down syndrome and other abnormalities of chromosome number	1	5
11-Abnormalities of chromosome structure	1	3
12-Sex chromosome anomalies	1	4
13-Genetics of common disorders	1	3
14- Current understanding of genetics of common disorders in children	2	3
TOTAL	15hrs 100%	45hrs100%

III.A) TOPICS:

Genetics Diseases

- --Molecular Diagnosis of Genetic Diseases and Patterns.
- --Integration of genetics into pediatric practice

Genetic counseling

Management and treatment of genetic disorders

- --Genetic approach in pediatric medicine
- --Human genome
- --Pattern of genetic transmission
- -- Cytogenetics

Methods of chromosomal analysis





Down syndrome and other abnormalities of chromosome number

Abnormalities of chromosome structure

Sex chromosome aneuploidy

Fragile chromosome sites

Mosaicism

--Genetics of common disorders

Current understanding of genetics of common disorders in children

III.B) Tutorial / Small Group Discussions

- 1- Clinical rounds
- 2-Workshop of genetic disease.

III.C) PRACTICAL CLASSES:

- 1. Clinical conferences
- 2. Supervised outpatient and inpatient care

4- Teaching and learning methods:

METHODS USED:

- 1. Lectures
- 2. Training Workshops
- 3. Clinical conferences
- 4. Seminars, scientific conferences

TEACHING PLAN:

Lectures: Division of students into 3 groups

once/week, Time from 10 to 11p.m

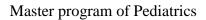
Tutorials:

Practical classes

Time plan:

Item	Time schedule	Teaching hours	T	otal ho	ours
Lectures	1times/week;	1X1 h =1h	1x	15	wks
	1hour for each		=15	hrs	







Practical	<u>1</u> hours / _week	1	1x45w = 45hrs
Total		2	60hrs

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA: Faculty bylaws

5-B) Assessment TOOLS:

Tool	Purpose (ILOs)
Written examination	To assess knowledge, understanding by problem
	solving attitudes and skills through essay and
	MCQs 2.1.1:2.1.32.2.1:2.2.52.3.1:2.3.5
Oral examination	To assess knowledge and attitudes and self
	confidence 2.1.1:2.1.32.2.1:2.2.52.3.1:2.3.5
	-2.4.1:2.4.7
Clinical examination	To assess knowledge ,practical , clinical skills
	through 2 short cases and one long case 2.3.1:2.3.5-
	2.4.1:2.4.7

Practical genetic exam considered as a part of clinical exam in general pediatrics

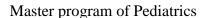
5-C) TIME SCHEDULE: Faculty bylaws

Exam	Week
1- Final written exam	48
2- Final oral exam	49
3- Thesis dissertation submission	72 -73

5-D) Weighting System:

Examination Marks allocated % of Total Marks	Examination	Marks allocated	% of Total Marks
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- Final exam: a- Written Pediatrics Genetics	25	50%
b- Oral Pediatrics Genetics	25	50%
Total	50	100%

The minimum passing & Passing grades (Faculty bylaws). (
 50% for written and 50% for clinical and oral and for overall)

FORMATIVE ASSESSMENT:

Student knows his marks after the Formative exams.

5-E) Examinations description:

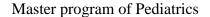
Examination	Description
- Final exam:	
a- Written	a-Short essay questions
b- Oral	a– Discuss with candidate their knowledge in clinical applied genetics through one oral session.

Practical genetic exam considered as a part of clinical exam in general

6- <u>List of references</u>:

- 6.1- Essential books (text books):
- **6.1.1- Emery's Elements of Medical Genetics**: With STUDENT CONSULT Online Access, 14e .Peter D Turnpenny , Sian Ellard (eds.) March 15, 2011.







- **6.1-2** Nelson Textbook of Pediatrics; Behrman RE, Kliegman RM, Jenon, HB; Elsevier Science; 19^h edition, 2011
- **6-1-3** Forfar & Arneill's Textbook of Pediatrics, McIntosh, N., Helms, P., Smyth, R. and Logan, S. (eds.), 7th edition, Churchill Livingston, Edinburgh, 2008. ISBN 978-0443103964

6.2- Recommended books:

6-2-1 MRCPCH Master Course in Child Health by Malcolm

Levene

6-2-2 Internet ressources

6.3- <u>Periodicals, Web sites, ... etc</u>: Disseminated on pediatric department website

www.benhapediatrics.com MD Consult, e medicine Medscape

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Lecture rooms in pediatric department
- Small group classes in clinical wards and staff rooms
- Information technology / AV aids on computer in department and faculty

Course coordinator: Prof .Iman Abdelraheim.

Head of dept: Prof. Dr. Mohamed ElBakry





Course Specification of Community Medicine

- **Code:** PEDI 506
- 1. Program on which the course is given: Master Degree in Pediatrics.
- 2. Major or minor element of the program: Minor.
- 3. Department offering the program: Pediatrics.
- **4. Department offering the course:** Community Medicine department.
- 5. Academic Year/Level: Second Part.
- **6. Date of specification approval:** department date **7/6/2013**.....

A) Basic Information

■ **Teaching hours: 11** hr lectures –**11** hrs practical

B) Professional Information

1. Overall Aims of the Course:

- **1.1** To equip candidates with the basis of public heath, in the term of child health care programs, Principles of statistical methods, research methods, biostatistics.
- **1.2** To equip candidates with the knowledge and skills necessary to practice heath education and training programs.
- **1.3** To provide candidates the basis of nutrition & management of malnutrition.
- **1.4** To enable the students to practice the principles of infection control.

2- Intended Learning Outcomes (ILOs):

A- Knowledge and understanding:

By the end of the course, students should be able to:

- **A.1** Understand and devise child health programs based on local needs.
- **A.2** Describe the Egyptian health care systems for the promotion and protection of child health.
- **A.3** Describe the basics of Principles of statistical methods, research methods and biostatistics.
- **A.4** Describe the basis of nutrition & types of malnutrition.





- **A.5** Recognize the most important infectious clinical conditions and outline the diagnosis, treatment, prevention and control of common pediatric problems.
- **A.6** Describe the principles of infection control.

B- Intellectual Skills:

By the end of the course, students should be able to:

- **B.1** Interpret suitable methods for conducting research.
- **B.2** Choose suitable methods for analysis of data.
- **B.3** Carry-out health education sessions.
- **B.4** Select appropriate method for assessing nutritional status.

C- Professional Skills:

By the end of the program the graduate will be able to:

- **C.1** Perform different types of surveys.
- C.2 Perform principles of statistical methods for collection, presentation & analysis of all types of data

D- General and Transferable Skills

By the end of the course, students should be able to:

- **D.1** Establish life-long self-learning required for continuous professional development.
- **D.2** Use the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.
- **D.3** Retrieve, manage, and manipulate information by all means, including electronic means.
- **D.4** Present information clearly in written, electronic and oral forms.
- **D.5** Conduct counseling sessions for prevention & control of different conditions for healthy individuals, for patients as well as their families.
- **D.6** Establish effective interpersonal relationship to Communicate ideas and arguments.

3- Course contents:			
Topics	Hours of	Practical/Tutorial	ILOs
	Lectures		



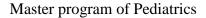


Types of data	1	1	A3,D1,D2,D3
Collection of data: Sampling Screening Survey Epidemiological studies	1	1	A3,B1,C4,C5 D1,D2,D3
Summarization of data: Measures of central tendency Measures of dispersion	2	1	A3,D1,D2,D3
Presentation of data	1	1	C5 , D3,D4
Normal distribution curve	2	1	A3, D1,D2,D3
Analysis of data & tests of significance	1	1	A3,B2, D1,D2,D3
Vital rates		1	A3
Basic nutrition: Essential food elements Trace elements Food pyramid Food balance sheet Nutritional assessment Malnutrition Breast feeding	1	2	A4,B3,B4,C1,C2
Child health services	2	2	A1,A2,A5,A6,C3, D5,D6
Total	11	11	

4- Teaching and learning methods:

- Lectures.
- Practical classes







Small group discussion with case study and problem solving.

5- Students Assessment methods:

Assessment tools

Tool	Purpose (ILOs)
Written examination	To assess knowledge, understanding and intellecual
	skills: 2.a.1:2.a.62.b.2.1:2.b.4
Oral examination	To assess knowledge and attitudes and self
	confidence 2.a.1:2.a.62.b.1:2.b.42.c.1:2.c.2
	-2.d.1:2.d.6

Assessment schedule

Exam	Time
Written exam	12 months after passing the first part exam.
Oral exam	After the written exam.

Weighting System

Examination	Marks allocated	% of Total Marks
Written	25	50%
Oral	20	40%
Field training(logbook)	5	10%
Total	50	100%

Examination description

Examination	Description
■ Written	Written paper composed of short essay-
	type questions.
	 One oral examination station with 2 staff
Oral	members (10-15 minutes: 4-5 questions).

6- List of references:

6.1- Essential books (text books) like *Khalil IF*, *1999:* Biostatistics, Cairo University **6.2-** Recommended books like: Wallace/Maxcy-Rosenau-Last public health & preventive medicine, editor, Robert B. Wallace et al.,15th edition 2008.

6.3- Periodicals, Web sites, etc:

- WHO.int.com
- Pub. Med
- Google
- Science direct





7- Facilities required for teaching and learning:

7.1 Adequate infrastructure: including teaching places (teaching class &teaching hall) provided with comfortable desks, fans, air condition, adequate sources of lighting both natural and artificial and security tools.

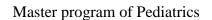
7.2 Teaching tools: including screens, black board, white board, data show, computers, laser printer, scanner & copier.

7.3 Computer program: for statistical analysis of data.

■ Course coordinator: Prof Dr.Mona Hussein Elmahdy

Head of department: Prof. Mahmoud Fawzy







الملحقات

ملحق ۱: Academic standard of the program

ملحق ٢: المعايير القياسية العامة للدراسات العليا الصادرة عن الهيئة.

ملحق ٣: مصفوفة مضاهاة المعاييرالأكاديمية المتبناة للبرنامج مع المعايير القياسية للدراسات العليا الصادرة عن الهيئة لدرجة الدبلومه.

ملحق ٤: مصفوفة مضاهاة المعايير الأكاديمية للبرنامج وأهداف ونواتج تعلم البرنامج

ملحق ٥: مصفوفة مضاهاة مقررات البرنامج مع المعارف والمهارات





ملحق ۱:Academic standard of the program

جامعه بنها لليه طب بنها

قسم طب الاطفال

وثيقة المعايير الأكاديمية لبرنامج الماجستير في طب الأطفال

Academic Reference Standards for

Master Degree in Pediatrics

1- Graduate Attributes:-

By the end of master program, the candidate should be able to do the following:

- 1.1 Apply and analysis of basic knowledge with academic background to use in pediatrics.
- 1.2Use knowledge and skills necessary to practice clinical pediatrics and child health
- 1.3 Apply fundamental knowledge of genetic diseases in children.
 - 1.4 Apply fundamental knowledge of neonatal diseases.
- 1.5. Acquire the competence and meet the need of our local community and respond appropriately to cultural and medical needs
- 1.6 use new technology necessary to practice clinical pediatrics
- 1.7 communicate effectively with his superior's and other team members
- 1.8 Collect and interpret basic laboratory and imaging data in pediatrics to solve medical problems.



- 1.9 Have good communication skills and attitudes towards patient and his family.
- 1.10 Aware of medical ethics and legal rights of patient and his family.
- 1.11 Able to collect and analyze medical research data according to basic research rules.
- 1.12 To aware graduate with importance of continuous medical education and improvement of his skills.
- 1.13 Use available resources to doctor efficiently.
- 1.14. To act with integrity, credibility and work rules of noble medical profession with accept accountability.
- 1.15. Awareness with current problems and new vision in general pediatrics.
- 1.16. Decision making in different medical problems and emergencies.

2- Academic standards:

2.1 Knowledge and understanding:

By the end of master program, the graduate should recognize and understand the followings:

- 2.1.1 Theories and fundamentals related to pediatrics as well as in related fields
- 2.1.2 Mutual influence between professional practice and its impacts on the environment
- 2.1.3 New Scientific developments in pediatrics, neonatology and genetics.
- 2.1.4. Perform relevant investigative and therapeutic procedures for the pediatric patient.
- 2.1.4 Moral and legal principles of professional practice in pediatrics.

The second

Master program of Pediatrics



- 2.1.5 Principles and the basics of quality in professional practice in the pediatrics.
- 2.1.6 Basics, ethics and methodology of scientific research in pediatrics.

2-2 Intellectual Skills:

By the end of master program, the graduate should be able to recognize the followings:

- 2.2.1 Analyze and evaluate the information in pediatrics and analogies to solve problems
- 2.2.2 Solve specialized problems with the unavailability of some data
- 2.2.3 Link between the various professional knowledge to solve problems in pediatrics practice
- 2.2.4 Conducting a research study or writing a systematic scientific study on the research problem.
- 2.2.5 Risk Assessment in professional practices in pediatrics.
- 2.2.6 Planning for the development of performance in pediatrics and neonatology
- 2.2.7 Professional decision-making in a variety of professional contexts.

2-3 - Practical/Professional skills

By the end of master program, graduate should accept the following skills:

- 2.3.1 Master the basic and modern specialized skills in pediatrics.
- 2.3.2 Writing and evaluating professional reports
- 2.3.3 Assess methods and tools to assess existing in pediatrics
- 2-3-4 Using technology to serve the professional practice in all branches of Pediatrics
- 2.3.5 Plane to upgrading the medical performance in pediatrics.

2-4 General and transferable Skills:





By the end of diploma program, graduate should accept the following skills:

- 2.4.1 Effective communication of all kinds; with patients, their families, other team members.
- 2.4.2 The use of information technology to serve the professional practice.
- 2.4.3 Self-assessment and determine the educational needs.
- 2.4.4 The use of different sources of information and knowledge.
- 2.4.5 Follow rules and indicators to assess the performance of others.
- 2.4.6 Work in different professional contexts team.
- 2.4.7 Manage time efficiently.
- 2.4.8 Self and continuous learning.

- تاريخ إقرار البرنامج في مجلس القسم رقم: - تاريخ إقرار البرنامج في مجلس الكلية: 16/6/2013

رئيس قسم طب الأطفال ا.د. محمد البكري

The second

Master program of Pediatrics



ملحق ٢: المعايير القياسية العامة لبرامج قطاع الدراسات العليا الصادرة عن الهيئة

برامج الماجستير

١ ـ موصفات الخريج

خريج برنامج الماجستير في أي تخصص يجب أن يكون قادرا على:

- ١-١ إجادة تطبيق أساسيات ومنهجيات البحث العلمى واستخدام أدواته المختلفة
 - ١-١ تطبيق المنهج التحليلي واستخدامه في مجال التخصص
- ٣-١ تطبيق المعارف المتخصصة ودمجها مع المعارف ذات العلاقة في مماسته المهنية
 - ١-٤ إظهار وعيا بالمشاكل الجارية والرؤى الحديثة في مجال التخصص
 - ١-٥ تحديد المشكلات المهنية وإيجاد حلول لها
- 1-٦ إتقان نطاق مناسب من المهارات المهنية المتخصصة واستخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسته المهنية
 - ١-٧ التوصل بفاعلية والقدرة على قيادة فرق العمل
 - ١-٨ اتخاذ القرار في سياقات مهنية مختلفة
 - ١-٩ توظيف الموارد المتاحة بما يحقق أعلى استفادة والحفاظ عليها
- ١٠-١ إظهار الوعى بدوره فى تنمية المجتمع والحفاظ على البيئة فى ضوء المتغيرات العالمية
 والاقليمية
 - ١-١١ التصرف بما يعكس الالتزام بالنزهة والمصداقية والالتزام بقواعد المهنة
 - ١-٢ تنمية ذاته أكاديميا ومهنيا وقادرا على التعلم المستمر

-2 - المعايير القياسية العامة

٢-١ المعرفة والفهم:

بأنتهاء دراسة برنامج الماجيستير يجب ان يكون الخريج على فهم ودراية بكل من:

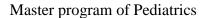
- ٢-١-١ النظريات والاساسيات المتعلقة بمجال التعلم وكذا في المجالات ذات العلاقة
 - ٢-١-٢ التأثير المتبادل بين الممارسة المهنية وانعكاسها على البيئة
 - ٢-١-٣ التطورات العلمية في مجال التخصص
 - ٢-١-٤ المبادئ الاخلاقية والقانونية للممارسة المهنية في مجال التخصص
 - ٢-١-٥ مبادئ واساسيات الجودة في الممارسة المهنية في مجال التخصص
 - ٢-١-٦ اساسيات واخلاقيات البحث العلمى

٢-٢ المهارات الذهنية:

بانتهاء دراسة برنامج الماجستير يجب ان يكون الخريج قادرا على:

- ٢-٢-١ تحليل وتقيم المعلومات في مجال التخصص والقياس عليها لحل المشاكل
 - ٢-٢-٢ حل المشاكل المتخصصة مع عدم توافر بعض المعطيات
 - ٢-٢-٣ الربط بين المعارف المختلفة لحل المشاكل المهنية
 - ٢-٢-٤ اجراء دراسة بحثية او كتابة دراسة علمية منهجية حول مشكلة بحثية
 - ٢-٢-٥ تقييم المخاطر في الممارسات المهنية في مجال التخصص
 - ٢-٢-٢ التخطيط لتطوير الاداء في مجال التخصص
 - ٢-٢-٧ اتخاذ القرارات المهنية في سياقات مهنية متنوعة







٢-٣ المهارات المهنية

بانتهاء دراسة برنامج الماجستير يجب ان يكون الخريج قادرا على:

٢-٣-١ اتقان المهارات المهنية الإساسية والحديثة في مجال التخصص

٢-٣-٢ كتابة وتقييم التقارير المهنية

٣-٣-٢ تقييم الطرق والادوات القائمة في مجال التخصص

٢-٤ المهارات العامة والمنتقلة:

بانتهاء دراسة برنامج الماجستير يجب ان يكون الخريج قادرا على :

٢-٤-١ التواصل الفعال بأنواعة المختلفة

٢-٤-٢ استخدام تكنولوجيا المعلومات بما يخدم الممارسة المهنية

٢-٤-٢ التقييم الذاتي وتحديد احتياجاته التعليمية

٢-٤-٤ استخدام المصادر المختلفة لحصول على المعلومات والمعارف

٢-٤-٥ وضع قواعد ومؤشرات تقييم اداء الاخارين

٢-٤-٢ العمل في فريق سياقات كهنية مختلفة

٢-٤-٧ ادارة الوقت بكفاءة

٢-٤-٨ التعلم الذاتي والمستمر



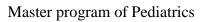


ملحق 3: مضاهاة المعايير الأكاديمية لبرنامج الماجستير في طب الاطفال مع المعايير المعايير المعايير المعايير المعايير المعايير المعايير الأكاديمية القياسية العامة الصادرة عن الهيئة

مواصفات الخريج:

مواصفات الخريج في برنامج الماجستيرفي طب الأطفال	مواصفات الخريج في المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجةالماجستير)
By end of the study pediatrics master degree program the graduate must be able to understand of	خريج برنامج الماجستير في أي تخصص يجب أن يكون قادرا على :
1-11 Able to collect and analyze medical research data according to basic research rules	 ١- ١ إجادة تطبيق أساسيات ومنهجيات البحث العلمى واستخدام أدواته المختلفة
1-1Apply and analysis of basic knowledge with academic background to use in pediatrics.	1-۲ تطبیق المنهج التحلیلی واستخدامه فی مجال التخصص
1-2-Use knowledge and skills necessary to practice clinical pediatrics and child health 1-3Apply fundamental knowledge of genetic diseases in children 1-4 Apply fundamental knowledge of	1-٣تطبيق المعارف المتخصصة ودمجها مع المعارف ذات العلاقة في مماسته المهنية
neonatal diseases	
1.15. Awareness with current problems and new vision in general pediatrics.	والرؤى الحديثة في مجال التخصص
1-8 collect and interpret basic laboratory and imaging data in pediatrics to solve medical problems	 ١-٥ تحديد المشكلات المهنية وإيجاد حلول لها
1-6 use new technology necessary to	١-٦ إتقان نطاق مناسب من المهارات







practice clinical pediatrics	المهنية المتخصصة واستخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسته
1-7 communicate effectively with his superior's and other team members	المهنية ١-٧ التوصل بفاعلية والقدرة على قيادة فرق العمل
1.16. Decision making in different medical problems and emergencies.	۱-۸ اتخاذ القرار في سياقات مهنية مختلفة
1-13 Use available resources to doctor efficiently.	 ١ - ٩ توظيف الموارد المتاحة بما يحقق أعلى استفادة والحفاظ عليها
1.5.Acquire the competence and meet the need of our local community and respond appropriately to cultural and medical needs	ا ـ ١٠ إظهار الوعى بدوره فى تنمية المجتمع والحفاظ على البيئة فى ضوء المتغيرات العالمية والاقليمية
1-10Aware of medical ethics and legal rights of patient and his family.1-14 To act with integrity, credibility and work rules of noble medical profession with accept accountability.	۱-۱ التصرف بما يعكس الالتزام بالنزهة والمصداقية والالتزام بقواعد المهنة
1.12.To aware graduate with importance of continuous medical education and improvement of his skills.	1-1 تنمية ذاته أكاديميا ومهنيا وقادرا على التعلم المستمر
1-9.Have good communication skills and attitudes towards patient and his family.	

أ ـ المعرفة والفهم:





2-1. Knowledge and understanding:

المعايير الأكاديمية لبرنامج الماجستير	(ARS)
هي طب الأطفال	المعايير القومية الأكاديمية القياسية العامة لبر امج قطاع الدر اسات العليا (درجة الماجستير)
By end of the study pediatrics master degree program the graduate must be able to understand of: 2.1.1 Theories and fundamentals	بانتهاءدراسةبرامج دبلومه الدراسات العليا يجب أن يكون الخريج قادراعلى فهم واستيعاب كل من: 1-1-التظريات والاساسيات والمعارف المتخصصة
related to pediatrics as well as in related fields	فى مجال التعلم وكذا العلوم ذات العلاقة بممارسته المهنية
2.1.2 Mutual influence between professional practice and its impacts on the environment	-٢- التأثير المتبادل بين الممارسة المهنية وانعكاسها على البيئة
2.1.3 New Scientific developments in pediatrics, neonatology and genetics.	-٣ التطورات العلمية في مجال التخصص
2.1.4. Perform relevant investigative and therapeutic procedures for the pediatric patient.	- المبادئ الاخلاقية والقانونية للممارسة المهنية في مجال التخصص
2.1.5 Moral and legal principles of professional practice in pediatrics.	
2.1.7 Principles and the basics of quality in professional practice in the pediatrics.	- مبادئ واساسيات الجودة في الممارسة المهنية في مجال التخصص
2.1. Basics, ethics and methodology of scientific research in pediatrics.	-٦ اساسيات واخلاقيات البحث العلمى





ب - القدرات الذهنية:

المعايير الأكاديمية للبرنامج الماجستير في طب الأطفال	ARS المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير)
By the end of pediatrics master's program graduate must able to:	بانتهاء دراسة برنامج ماجستير الدراسات العليا يجب أن يكون الخريج قادرا على:
2.2.1 Analyze and evaluate the information in pediatrics and analogies to solve problems	- ۱ - تحديد وتحليل المشاكل فى مجال التخصص وترتيبها وفقا لأولوياتها -
2.2.2 Solve specialized problems with the unavailability of some data	-٢- حل المشاكل المتخصصة مع عدم توافر بعض المعطيات
2.2.3 Link between the various professional knowledge to solve problems in pediatrics practice	-٣- الربط بين المعارف المختلفة لحل المشاكل المهنية
2.2.4 Conducting a research study or writing a systematic scientific study on the research problem.	- ٤ - اجراء دراسة بحثية او كتابة دراسة علمية منهجية حول مشكلة بحثية
2.2.5 Risk Assessment in professional practices in pediatrics.	 ٥- تقييم المخاطر في الممارسات المهنية في مجال التخصص
2.2.6 Planning for the development of performance in pediatrics and neonatology	-٦ _التخطيط لتطوير الاداء في مجال التخصص
2.2.7 Professional decision-making in a variety of professional contexts.	 ٧- اتخاذ القرارات المهنية في سياقات مهنية متنوعة







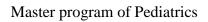
ج. مهارات مهنية وعملية:

المعايير الأكاديمية لبرنامج الماجستير في طب الأطفال	(ARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجةالماجستير)
By the end of pediatrics master's program graduate must able to: 2.3.1 Master the basic and modern specialized skills in pediatrics.	بانتهاء دراسة برنامج ماجستير الدراسات العليا يجب أن يكون الخريج قادرا على: ا اتقان المهارات المهنية الاساسية والحديثة في مجال التخصص
2.3.2 Writing and evaluating professional reports	-٢- كتابة التقارير المهنية.
Assess methods and tools to assess existing in pediatrics	-٣ تقييم الطرق والادوات القائمة في مجال التخصص التخصص
2-3-4 using technology to serve the professional practice in all branches of Pediatrics	- ٤ - استخدام الاساليب التكنولوجية في الممارسة العملية
2.3.5 Plane to upgrading the medical performance in pediatrics.	ـه ـوضع خطط للتطوير

د . مهارات عامة :

المعايير الأكاديمية لبرنامج الماجستير في طب الأطفال	(ARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجةالماجستير)
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By the end of pediatrics master's program graduate must able to: 2.4.1 Effective communication of all kinds; with patients, their families, other team members.	بانتهاء دراسة برنامج الماجستير يجب ان يكون الخريج قادرا على: - ١ التواصل الفعال بأنواعه المختلفة
2.4.2 The use of information technology to serve the professional practice.	- ٢ استخدام تكنولوجيا المعلومات بما يخدم الممارسة المهنية
2.4.3 Self-assessment and determine the educational needs.	-٣ التقييم الذاتى وتحديد احتياجاته التعليمية
2.4.4 The use of different sources of information and knowledge.	 استخدام المصادر المختلفة لحصول على المعلومات والمعارف
2.4.5 Rules and indicators to assess the performance of others.	٥ ـ وضع قواعد ومؤشرات تقييم اداء الاخارين
2.4.6 Work in different professional contexts team.	٦- العمل فى فريق سياقات مهنية مختلفة
2.4.7 Manage time efficiently.	-٧ ادارة الوقت بكفاءة
2.4.8 Self and continuous learning.	-٨ التعلم الذاتى والمستمر





ملحق 4: مصفو فة مضاهاة المعايير الأكاديمية للبرنامج و أهداف و نواتج تعلم البرنامج

اهداف برنامج الماجستير في طب الأطفال	مواصفات الخريج
• 1.1	By end of the study pediatrics master degree program the graduate must be able to understand of: 1-1Apply basic knowledge with the academic background of pediatrics.
• 1.2	1-2-Use knowledge and skills necessary to practice clinical pediatrics and child health
• 1.3	1-4 Apply fundamental knowledge of neonatal diseases
• 1.4	1-8 collect and interpret basic laboratory and imaging data in pediatrics
• 1.5	1-3 Apply fundamental knowledge of genetic diseases in children
• 1.6	1-9 Have good communication skills and attitudes towards patient and his family.
• 1.7	1.11Able to collect and analyze medical research data according to basic research rules.
• 1.8	1-5 Acquire the competence and meet the need of our local community and respond appropriately to cultural and medical needs
• 1.9	1.6. Use new technology necessary to practice clinical pediatrics.
	1.15. Awareness with current problems and new

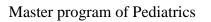




	vision in general pediatrics
• 1.10	1-12 To aware graduate with importance of continuous medical education and improvement of his skills.
• 1.11	1.10. Aware of medical ethics and legal rights of patient and his family.
• 1.12	1.13 Use available resources to doctor efficiently.
• 1.13	1.7 communicate effectively with his superior's and other team members
• 1.14	1.14. To act with integrity, credibility and work rules of noble medical profession with accept accountability.
• 1.15	1.16. Decision making in different medical problems and emergencies.

(الأطفال	ب طب ا	ىتىر فى	الماجس					
		2-a <u>K</u>	Cnowle	edge a	ınd ur	ıderst	andin	g	المعايير الأكاديمية
2.a.9	2.a.8	2.a.7	2.a.6	2.a.5	2.a.4	2.a.3	2.a.2	2.a.1	لبرنامج الماجستيرفي طب الأطفال







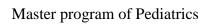
V	√	√		√	√	 √	1	: المعرفة والفهم. By end of the study pediatrics diploma program the graduate must be able to understand and absorb all of: 2.1.1 Theories and fundamentals related to pediatrics as well as in related fields
				\checkmark				2-1-2 Mutual influence between professional practice and its impacts on the environment
		$\sqrt{}$				 	1	2.1.3 New Scientific developments in pediatrics, neonatology and genetics.
		$\sqrt{}$			$\sqrt{}$			2.1.4. Perform relevant investigative and therapeutic procedures for the pediatric patient.
√			√					2.1.5 Moral and legal principles of professional practice in pediatrics
√				√	V			2.1.6-Principles and the basics of quality in professional practice in the pediatrics.
								2.1.7 Basics, ethics and methodology of scientific research in pediatrics.





				فال	لبرنامج ب الأط	المعايير الأكاديمية لبرنامج الماجستيرفي طب الأطفال				
2.b.10	2.b.9 2.b. 2.b. 2.b. 2.b.5 2.b. 2.b. 2.b.2 2.b.1								لبرنامج الماجستيرفي طب الأطفال	
√		0	√ √	.6	√	<u>4</u> √	√	√	√	: بالقدراتالذهنية At end of the study diploma program in pediatrics graduate should be able to: 2.2.1- Analyze and evaluate the information in pediatrics and analogies to solve problems
						$\sqrt{}$		~	$\sqrt{}$	2.2.2 Solve specialized problems with the unavailability of some data
V			V			√ √	V	V	V	2.2.3 Link between the various professional knowledge to solve problems in pediatrics practice
				V						2.2.4 Conducting a research study or writing a systematic scientific study on a research problem.
V			1		√					2.2.5 Risk Assessment in professional practices in pediatrics.



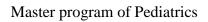




					2.2.6	Planning	for	the
					develo	pment		of
	'				perfor	mance in	pedia	trics
					and ne	onatology	•	
					2.2.7	Professiona	l decis	ion-
1					makin	g in a '	variety	of
\ \ \					profes	sional cont	exts.	

	2-c	ستیر Profe	جالماج طفال ssiona	المعايير الأكاديمية لبرنامج الماجستيرفي طب الأطفال					
2.c.9	2.c.8	2.c.7	2.c.6	2.c.5	2.c.4	2.c.3	2.c.2	2.c.1	
									ج. مهارات مهنية و عملية By end of the study diploma program in pediatrics graduate should be able to:
	√	√		$\sqrt{}$	√	1	1		2.3.1- Master the basic and modern specialized skills in pediatrics.
√					1				2-3-2- Writing and evaluating professional reports
			V			1	1	V	2.3. *- Assess methods and tools to assess existing in pediatrics
$\sqrt{}$									2-3-4 using technology to



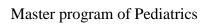




				serve the professional
				practice in all branches of
				Pediatrics
				2.3.5 Plane to upgrading
,			,	the medical performance in
				pediatrics.

			المعايير الأكاديمية								
		2		لد نامحالماحستد في							
2.d.11	2.d.10	2.d.9	2.d.8	2.d.7	2.d.6	2.d.5	2.d.4	2.d.3	2.d.2	2.d.1	لبرنامج الماجستير في طب الأطفال
		√				√	\checkmark		√	√	: all in
V	V		V								2.4.2 The use of information technology to serve the professional practice.
				V							2.4.3 Self-assessment and







								determine the educational needs.
√ 	V		V	V				2.4.4 The use of different sources of information and knowledge.
		V						2.4.5 Rules and indicators to assess the performance of others.
		V			V			2.4.6 Work in different professional contexts team.
								2.4.7 Manage time efficiently.
V	V							2.4.8 Self and continuous learning.





ملحق 5: مصفوفة مضاهاة لمقرارت البرنامج الدراسى لماجستير طب الأطفال مع نواتج التعلم

ن	a.المعارة	Know	ledge	& U	nders	tandi	ing			ILOs
2.a.9	2.a.8	2.a.7	2.a.6	2.a.5	2.a.4	2.a.3	2.a.2	2.a.1		Courses & codes
$\sqrt{}$	$\sqrt{}$							$\sqrt{}$	PEDI 604	Pediatrics
	$\sqrt{}$	$\sqrt{}$		√ √	$\sqrt{}$	√ √			PEDI 605	Genetics
		V		V	V	V			PEDI 606	Child health and neonatal care
								$\sqrt{}$	PEDI 601	Physiology •
				_				$\sqrt{}$	PEDI 602	Pathology •
								$\sqrt{}$	PEDI 601	Biochemistry •
								$\sqrt{}$	PEDI 602	Embryology •
								V	PEDI 601	Pharmacology •
								$\sqrt{}$	PEDI 602	Microbiology •
		$\sqrt{}$						$\sqrt{}$	PEDI 606	Community •
$\sqrt{}$										Thesis •

		ذهنية	إمهارات	. Intelle	ILOs							
2.b.10-2.b.9	2,b.	2.b.7	2.b.6	2.b.5	2.b.4	2.b.3	2.b.2	2.b.1		Courses & codes		
$\sqrt{}$			V	V			V	V	PEDI 604	Pediatrics		
$\sqrt{}$		V		$\sqrt{}$				$\sqrt{}$	PEDI 605	Genetics		
√		√				$\sqrt{}$		√	PEDI 606	Child health and neonatal care		

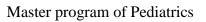




V						PEDI 601	Physiology •
					$\sqrt{}$	PEDI 602	Pathology •
						PEDI 601	Biochemistry •
						PEDI 602	Embryology •
			V	V		PEDI 601	Pharmacology •
					V	PEDI 602	Bacteriology •
						PEDI 606	Community •
$\sqrt{}$		V					Thesis •

HOs	ls	Skil	ica	Clini	cal &	ractio	c. Pıمها	رات عملي	بة و مهنيا	2
Courses & codes	2.c.1	2	3 2	2.c.3	2.c.4	2.c.5	2.c.6	2.c.7	2.c.8	2.c.9
Courses										<u> </u>
I 604 Pediatrics	$\sqrt{}$ PEDI 604									
OI 605 Genetics	√ PEDI 605	1					$\sqrt{}$		√	
Child health and neonatal care	PEDI 606							V	V	
Physiology •	PEDI 601									
Pathology •	PEDI 602				V					
I 601 Biochemistry •	PEDI 601									
Embryology •	PEDI 602	1			<u> </u>					
Pharmacology •	PEDI 601									
Microbiology •	PEDI 602									
Community •	PEDI 606									
Thesis •										







Courses & codes Courses	ıble	d. General and transferable مهارات عامة											
	2.d.1	2.d.2	2.d.3	2.d.4	2.d.5	2.d. 6	2.d.7	2,d .8	2.d.9	2,d.10	2,d.1		
Pediatrics OI 605 Genetics	√ √	√ √	√ √	\ \ \	√ √ √	\ \ \ \ \	\ \ \ \	\ \ \ \	\ \ \ \	√	√ √ √		
Child health and neonatal care Physiology •	√	√	√ √	√	V	1	V	\ \ \	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	V			
Pathology • DI 601 Biochemistry •			·			\[\sqrt{1} \]		\ \ \		√ √			
Embryology • 1 601 Pharmacology •						\ \ \ \		\ \ \ \		\ \ \ \			
oI 602 Microbiology • OI 606 Community •						\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		\ \ \ \ \		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
Thesis •	$\sqrt{}$		√			V	V	1		1			