



توصيف برنامج ماجستير الفسيولوجيا الطبيه



جامعة بنها
كلية الطب البشرى
قسم الفسيولوجيا الطبيه

توصيف برنامج ماجستير الفسيولوجيا الطبيه
(عام 2013-2014)

A- Basic information: أ. معلومات أساسية :

1- **Name of the program:** Master degree in physiology

2- **Nature of the program:** Multiple

3- **Departments responsible:**

- Physiology
- Biochemistry, pharmacology and pathology

4-**Date of approval of program specification:**

- Department council: 8/9/2013 number (220)

5-**Date of approval of program specification:**

- Faculty council:15/9/2013 number (356)

6-**Coordinator:** Prof. Dr. Alla El-deen Abdelazez Eltalees
Dr. Noha Ibrahim Hussien

7-**Internal evaluationof program specification:** Prof. Dr. Mohammed
Samy El-hammady

8-**External evaluationof program specification:** Prof. Dr. Soheer Abas
Helmy, professor of physiology, Elmansura University

B- Professional information: ب. معلومات متخصصة

1- **Program aims:**

١ - الأهداف العامة للبرنامج

The overall aims of the program are to:

1. **Apply** in proficiency the basics and methodologies of scientific research and point on the disturbance in the physiology of different body systems.
2. **Identify** the professional problems in the field of medical physiology and find solutions.



3. **Show** awareness of community needs and assessment of physiological problems and its solving.
4. **Use** different technological methods which add to his/her Professional applications.
5. **Show** an awareness of the problems of modern and current visions in the field of diagnosis and its relationship to medical physiology.
6. **Enable** the graduates to improve their skills in research and undergraduate teaching.
7. **Ensure** training the graduates about the ability to lead teams by training on doing seminars, tutorials and supervised research.
8. **Ensure** an understanding of quality assurance issues by the use of appropriate technological means to serve the professional practice.
9. **Making** decision in different professional contexts by acquiring sufficient knowledge in related sciences.
10. **Enable** the graduates to have a wide vision about awareness of new methods and tools to analyze its role in the problem solving and continuous learning.
11. **Ensure** the completeness and effectiveness, and where necessary the further development, of policies, procedures and structures to support teaching and learning.
12. **Acquire** a broad and individualized range of personal and transferable skills that are of great value in future careers.
13. **Enable** the graduates to have a wide vision about development of new methods and tools to analyze and criticize any research scientifically.

٢ - المخرجات التعليمية المستهدفة من البرنامج :

2-Intended Learning Outcomes (ILOS):

2.a. Knowledge and Understanding

٢.أ.المعرفة والفهم

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

2.a.1. Understand the main functions of systems, organs and cells.

2.a.2. Know the basic physiological processes in correct medical terms and in correct order.

2.a.3. Describe the different mechanisms of homeostasis and how to use it in applied physiology, sport physiology, genetics and molecular biology.



2.a.4. Explain the basic knowledge of one of the following sciences(biochemistry or pharmacology or pathology) by basing the 1st. part of the master degree and recite how to connect it with medical physiology.

2.a.5. Describe the comprehensive appreciation of laboratory technique and methodologies used in integrated physiology, biochemistry, pharmacology or pathology.

2.a.6. Highlight the moral and legal principles of professional practice in the field of Medical Physiology including cardiovascular system, nervous system, gastrointestinal system, endocrine system, metabolism and sport physiology in health and disease.

2.a.7. Identify and trace the pharmacological effects of drugs on physiology of the cell and body systems.

2.a.8. Explain the basics and ethics of scientific research.

2.b. Intellectual Skills:

٢.ب. القدرات الذهنية

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

2.b.1. Analyze the deviations from the normal physiology and its effects and its relation to biochemistry, pathology and pharmacology.

2.b.2. Translate the consequences of physiological disorders into clinical manifestations and vice versa as the principles and organization of signal transduction pathways.

2.b.3. Construct physiological information and biochemistry that are physiology related in the form of simplified diagrams with complete data on it.



2.b.4. Integrate different branches of physiology to each other and to other specialties of medicine and determine how to use this in problem solving.

2.b.5. Create a research study and / or writing a scientific study on a research problem.

2.b.6. Assess risks in professional practices in the field of medical physiology

2.b.7. Analyzes updated physiological information and the ability to search.

2. c. Practical and professional Skills: ج.٢.مهارات مهنية وعملية

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

2.c.1. Perform efficiently the appropriate steps and procedures in measuring pulse , respiratory rate and arterial blood pressure.

2.c.2. Perform simple experimental blood tests and the use of this data in problem solving.

2.c.3. Write a comment on a normal ECG paper.

2.c.4. Interpret different laboratory tests as isolated heart perfusion.

2.c.5. Asses pulmonary function tests and renal function testes.

2.c.6-Record cardiovascular parameters in laboratory animals under various conditions.

2.c.7. Asses skeletal and smooth muscle contraction.

2.c.8.perform and study platelet aggregation.

2.c.9. perform sensory and motor examination.

2.d. General and transferable skills: د.٢.مهارات عامة ومنتقلة

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



2.d.1. Learn discipline and appropriate manners when working in a lab and cooperation with his colleges and respect towards general property and how to handle learning facilities with care and self-learning.

2.d.2. Deal properly and cautiously in a lab.

2.d.3. Use the sources of biomedical information to remain current with the advances in knowledge & practice for self-learning.

2.d.4. Participate in community development and in drawing up and implementing development policies and plans.

2.d.5. Evaluate and determine self need of education and use Information and Communications Technology for problem solving.

2.d.6. Use different sources to get knowledge and information for assessment of performance of others.

2. d.7. Work in team and save time.

2.d.8. Assess ourselves and identify personal learning needs.

3- Academic Standards: المعايير الأكاديمية للبرنامج:

- **Academic Standards of master of physiology**, approved in department council 9-6- 2013 and in faculty council no (354) date 16-6-2013. (ملحق ١)

4-Reference standards (benchmarks) العلامات المرجعية:

- **Academic reference standards (ARS), master Program (March 2009)**, which were issued by the National Authority for Quality Assurance & Accreditation of Education **NAQAAE** (ملحق ٢)

5- Program structure and contents

a) **Program duration: 2 years**

٥ - هيكل ومكونات البرنامج :
أ- مدة البرنامج



- 1st part: - One Semester (6 months).
- 2nd part: - two Semesters (1 year).
- Thesis:- One Semester (6 months starting from beginning of the 2nd part).

b) Program structure

ب- هيكل البرنامج

- Total hours of program: 44 credit hours
- Theoretical: 18 credit hours
- Practical: 5 credit hours
- Faculty requirements: 6 credit hours
- Thesis: 15 credit hours

c) Levels and courses of the program:

ج- مستويات ومقررات البرنامج

الساعات المعتمدة	الكود	المقررات	البند
6 ساعات	UNIV 601	الجامعة والكلية	متطلبات
6 ساعات	PHYS 601	يتم اختيار احد المواد الآتية مثل الكيمياء الحيوية – الباثولوجي- الفارماكولوجي او الفسيولوجيا العامه	الجزء الأول
5 ساعات		تسجل بها الأنشطة المختلفة مثل حضور الندوات العلمية والمؤتمرات والدورات التدريبية وإجراء أبحاث إضافية	كراسة الأنشطة
12 ساعة		يشمل:	الجزء الثاني
1 ساعة	PHYS 602	فسيولوجيا القلب و الصدر و الجهاز الدوري	
1 ساعة	PHYS 603	فسيولوجيا سوائل الجسم و الكلى و الجهاز البولي	
1 ساعة	PHYS 604	فسيولوجيا الجهاز العصبي	
1 ساعة	PHYS 605	فسيولوجيا الغدد الصماء و الجهاز التناسلي	



١ ساعه	PHYS606	فسيولوجيا الجهاز الهضمي و التمثيل الغذائى	
٢ ساعه	PHYS607	مقرر اختياري من الأتى : البيولوجيا الجزئيه الجينات و العلاج بها -نقل الأعضاء- فسيولوجيا الطب الرياضي	
٥ ساعات	PHYS 608	الجزء العلمى و يشمل لجهزه القياسات الكهربيه و الالكترونيه و طرق استخدامها	
	PHYS 609	تجارب علميه متقدمه تشمل: -Isolated perfused Heart (rabbit & frog) -Recording Cardiovascular Parameters in animals Under various conditions - Pulmonary function tests assessment - Skeletal muscle Contraction assessm. - Smooth muscle Contraction Neuromuscular Transmission assessm. -Autonomic functions in humans - EMG and nerve Conduction velocity - Study of platelet Aggregation	
١٥ ساعه			رساله الماجستير
٤٤ ساعه			الاجمالى

قرر مجلس القسم عمل اجراء تصحيحي باللائحة في مجلس قسم بتاريخ ٢٠١٣/٦/٩ بالاتى:

• دمج المقررات الالزاميه فى الجزء الثانى في مقرر واحد تحت اسم Medical

physiology

Code: PHYS 602, 603, 604, 605, 606,608 and 609



First part (one semester):

a- Compulsory courses: none

b- Elective courses:

Course Title	Course	NO. of hours per week				Total teaching hours
		Theoretical		Laboratory /practical	Total	
		Lecture	Seminar			
1st. Part	PHYS601	3		9	12	180
Biochemistry						
Or						
Pharmacology						
Or						
Pathology						
Or general physiology						

c- Selective: none

Second part (2 semesters):

a- Compulsory courses:

Course Title	Course Code	NO. of hours per week			Total teaching hours / Two Semesters
		theoretical Lectures	Laboratory /practical	Seminar	
Medical physiology	PHYS602, 603, 604, 605, 606,608, 609	5	15	20	600



b- Elective courses:

Course Title	Course Code	NO. of hours per week		Total teaching hours / Two Semesters
		theoretical Lecture; Seminar;	Laboratory /practical	
-molecular biology and genetics -Sport physiology -organ transplantation	PHYS607	1	3	120

c- Selective: none

6- محتويات المقررات (راجع توصيف المقررات) (ملحق ٦)

- كود أو رقم المقرر :
- اسم المقرر :
- المحتويات:

7- متطلبات الإلتحاق بالبرنامج : (6) Program admission requirements

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

(١) -أن يكون حاصلًا على درجة البكالوريوس في الطب والجراحة من إحدى 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 فى درجة البكالوريوس.
- ج- يسمح للحاصل على الدبلوم وعلى خلاف لنظام هذه اللائحة أن يسجل لدرجة الماجستير بشرط أن يكون تقديره فى الدبلوم لا يقل عن جيد وبغض النظر عن تقديره فى البكالوريوس.
- (٢) أن يكون قد أمضى السنة التدريبية أو ما يعادلها (سنة الامتياز)
- (٣) أن يتفرغ للدراسة لمدة سنة على الأقل فى الجزء الثانى (فصلين دراسيين)
- مادة (٥): يكون التقدم للقيده لدرجة الماجستير مرة واحدة فى السنة خلال شهري يوليو وأغسطس من كل عام.
- تبدأ الدراسة لدرجة الماجستير فى شهر أكتوبر من كل عام

٨ - القواعد المنظمة لإستكمال البرنامج :

٨ - القواعد المنظمة لإستكمال البرنامج : (طبقاً لما هو مذكور فى اللائحة)

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 التفصيلى للمقررات فى 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 فى الطالب لنيل درجة ماجستير التخصص فى أحد الفروع الاكلينيكية والعلوم الطبية الأساسية:

- أ- حضور المقررات الدراسية والتدريبات الاكلينيكية والعملية والمعملية بصفة مرضية طبقا للساعات المعتمدة.
- ب- أن ينجح فى امتحان القسمين الأول والثانى.
- ت- اجتياز الطلب لثلاث دورات فى الحاسب الألى (دورة فى مقدمة الحاسب – دورة تدريبية متوسطة – دورة فى تطبيقات الحاسب الألى) وذلك قبل مناقشة الرسالة.
- ث- اجتياز اختبار التوفيل بمستوى لا يقل عن ٤٠٠ وحدة وذلك قبل مناقشة الرسالة.



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أن يقوم باعداد بحث فى موضوع تقره الجامعة بعد موافقة مجلس القسم ومجلس الكلية ينتهى باعداد رسالة تقبلها لجنة التحكيم.

9- Students Assessment Methods ٩- طرق وقواعد تقييم الملتحقين بالبرنامج

م	الوسيلة	مخرجات التعلم المستهدفة
	Written examination	To assess knowledge & understanding , intellectual skills.2.a.1.....2.a.8, 2.b.1,2.b.7
	Oral examination	To assess knowledge & understanding, intellectual skills & General & transferable skills2.a.1.....2.a.8 2.b.1,2.b.7, 2.d.1.....2.d.8
	Practical examination	To assess knowledge & understanding, intellectual skills & General & transferable skills2.a.1.....2.a.8 2.b.1,2.b.7, 2.d.1.....2.d.8 practical skills: 2.c.1.....2.c.9
	Thesis Discussion	To assess knowledge & understanding , intellectual skills. 2.a.1.....2.a.8, 2.b.1,2.b.7

First part

المقرر	الاختبار	الدرجة			إجمالي
		تحريري	شمسي	إجمالي	
Biochemistry or pharmacology or pathology or	اختبار تحريري مدته ثلاث ساعات + اختبار شمسي + اختبار	150			



					عملي	general physiology
		٧٥	٧٥			
٣٠٠	إجمالي الدرجة					

Second part

إجمالي	الدرجة				الاختبار	المقرر
	عملي	إكلينيكي	شخصي	تعميري		
	١٥٠		١٥٠	١٥٠ + ١٥٠	اختباران تعميريان مدة كل منهما ثلاثة ساعات + اختبار شخصي + اختبار عملي	Compulsory: medical physiology Elective : sport physiology ,molecular biology and genetics and organ transplantation
٦٠٠	إجمالي الدرجة					

10- Evaluation of Program:

10 - طرق تقويم البرنامج:

Evaluator	Tools	Sample
Internal evaluator (s) مقيم داخلي	report	1-2 Report
External Evaluator (s) مقيم خارجي	report	1-2 Report
Senior student (s) طلاب السنة النهائية	Interview, questionnaires	All
Alumni الخريجون	Interview,	Not less than 50%



	questionnaires	from the last 3 years
Stakeholder (s) أصحاب العمل	Interview, questionnaires	Representative samples from all sectors
Others طرق أخرى	None	

11: استراتيجيات التعليم و التعلم علي مستوي البرنامج:

1. استراتيجية التعلم النشط. Active learning
2. استراتيجية التعليم المبني على المخرجات. Outcome-based learning
3. استراتيجية التعليم المبني على حل المشكلات. Problem-based learning
4. استراتيجية التعلم القائم على الدليل Evidence based learning

المسئول عن البرنامج : أ.د. علاء الدين عبد العزيز التليس
د. نهى ابراهيم حسين

التاريخ : ٨ / ٩ / ٢٠١٣

التوقيع
مجلس الكلية ٣٥٦ ٢٠١٣/٦/١٦

الملاحق :

ملحق ١ : Academic standard of the program

ملحق ٢: المعايير القياسية العامة للدراسات العليا الصادرة عن الهيئة (درجة الماجستير).

ملحق ٣: مصفوفة المعايير الأكاديمية للبرنامج مع المعايير القياسية للدراسات العليا الصادرة عن الهيئة.

ملحق ٤: مصفوفة اهداف ونواتج التعلم للبرنامج مع المعايير الأكاديمية للبرنامج.

ملحق ٥: مصفوفة المقررات مع البرنامج Program-Courses ILOs Matrix

ملحق ٦: توصيف المقررات



Program courses

First part
Elective courses : 1- general physiology
2- medical biochemistry
3- pharmacology
4- clinical pathology
Second part
Compulsory course : medical physiology
Elective courses : -Sport physiology - Molecular biology and Genetics -Organ transplantation



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ملحق ١ : وثيقة المعايير الأكاديمية

وثيقة المعايير الأكاديمية المرجعية لبرنامج الماجستير

1- Gratitude Attributes:

- 1- Demonstrate excellence in the application of the principals and methodologies of scientific research and the use of its various tools
- 2- Apply analytical methodology in the field of applied physiology.
- 3 –apply specialized knowledge in the field of Clinical biochemistry, pathology and pharmacology and integrate it with knowledge in various sections of applied physiology.
- 4- Show an awareness of current problems and new concepts in medical physiology.
- 5- Demonstrate professional problems related to medical physiology and propose appropriate solutions.
- 6- Demonstrate proficiency in a significant range of specialized professional skills the use of appropriate technological means to serve the professional practice in physiology.
- 7- Communicate effectively and lead work teams.
- 8-decision making in different professional contexts related to physiological practice.
- 9- Employ available resources to achieve the highest benefit and preservation
- 10- Show in depth awareness of his role in community development and environmental preservation according to regional and global changes
- 11- Behaving in ways reflecting a commitment to integrity and credibility and follow the rules of the profession.



12- Exercise autonomy in academic and professional self-development and continuous learning

13- Ensure the completeness and effectiveness, and where necessary the further development, of policies, procedures and structures to support teaching and learning.

2. Academic standards:

2.1. Knowledge and Understanding:

By the end of the master program, the candidate should be able recognize and Understand the following:

1.a.2. Established updated and evidence based theories, basics and developments of physiology and related sciences.

1.a.2. Mutual influence between medical physiology and its impacts on the environment

1.a.3. updated knowledge about Scientific advances in medical physiology.

1.a.4. Ethical and medico legal principles of professional practice in the field of medical physiology.

1.a.5. Principles and the basics of quality in the field of medical physiology.

1.a.6. Basics and ethics of scientific research related to medical physiology.

2.b. Intellectual Skills:

By the end of the master program the candidate should be able to recognize and mastering the following:

2.b.1.analyze and evaluate information in the field of physiology and apply these information in problem solving



- 2.b.2. solve special problems in absence of complete data.
- 2.b.3. link between different knowledge to solve professional problems in medical physiology.
- 2.b.4. Conducting a research study or writing a scientific study or thesis on research problem related to medical physiology.
- 2.b.5. Demonstrate risk Assessment in professional practice in medical physiology
- 2.b.6. Planning for development of performance in medical physiology.
- 2.b.7. Professional decision-making in a variety of professional contexts

2.c. Practical & Professional Skills:-

By the end of master the program, the candidate should accept & apply the following skills:

- 2.c.1. show proficiency in basic and upto date professional, practical and laboratory skills relevant to medical physiology.
- 2.c.2. Write and evaluate medical reports in the field of medical physiology.
- 2.c.3. Evaluate established methods and tools relevant to medical physiology.

2.4. communication and transferable skills

By the end of the program graduates should be able

- 2.d.1. communicate effectively using variety of communication skills
- 2.d.2. the use of information technology to serve the development of medical physiology practice.
- 2.d.3. Exercise autonomy in self-evaluation and continuous learning.



2.d.4. Use of different resources for retrieval of information and knowledge

2.d.5. The development of standards that serve to assess the performance of others in medical physiology.

2.d.6. work effectively in a team as a leader or a member in various professional situations

2.d.7. Develop the skills of effective time management

2.d.8. Develop the skills of continuous self-learning in the field of medical physiology.

اعتماد مجلس القسم رقم (.....٢١٨....) ، بتاريخ ٦./...../٢٠١٣.....

مجلس الكلية ٣٥٤ ٢٠١٣/٦/١٦

رئيس مجلس القسم



ملحق ٢ : المعايير القياسية العامة لبرامج الماجستير ٢٠٠٩

الصادرة عن الهيئة القومية لضمان جودة التعليم والاعتماد

برامج الماجستير

١- موصفات الخريج

- خريج برنامج الماجستير في أي تخصص يجب أن يكون قادرا على :
- ١-١ إجادة تطبيق أساسيات ومنهجيات البحث العلمي واستخدام أدواته المختلفة
 - ٢-١ تطبيق المنهج التحليلي واستخدامه في مجال التخصص
 - ٣-١ تطبيق المعارف المتخصصة ودمجها مع المعارف ذات العلاقة في ماسته المهنية
 - ٤-١ إظهار وعيا بالمشاكل الجارية والرؤى الحديثة في مجال التخصص
 - ٥-١ تحديد المشكلات المهنية وإيجاد حلول لها
 - ٦-١ إتقان نطاق مناسب من المهارات المهنية المتخصصة واستخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسته المهنية
 - ٧-١ التوصل بفاعلية والقدرة على قيادة فرق العمل
 - ٨-١ اتخاذ القرار في سياقات مهنية مختلفة
 - ٩-١ توظيف الموارد المتاحة بما يحقق أعلى استفادة والحفاظ عليها
 - ١٠-١ إظهار الوعي بدوره في تنمية المجتمع والحفاظ على البيئة في ضوء المتغيرات العالمية والاقليمية
 - ١١-١ التصرف بما يعكس الالتزام بالنزهة والمصداقية والالتزام بقواعد المهنة
 - ١٢-١ تنمية ذاته أكاديميا ومهنيا وقادرا على التعلم المستمر

2- المعايير القياسية العامة

١-٢ المعرفة والفهم :

- بأنتهاء دراسة برنامج الماجستير يجب ان يكون الخريج على فهم ودراية بكل من :
- ١-١-٢ النظريات والاساسيات المتعلقة بمجال التعلم وكذا في المجالات ذات العلاقة
 - ٢-١-٢ - التأثير المتبادل بين الممارسة المهنية وانعكاسها على البيئة
 - ٣-١-٢ التطورات العلمية في مجال التخصص
 - ٤-١-٢ المبادئ الاخلاقية والقانونية للممارسة المهنية في مجال التخصص
 - ٥-١-٢ مبادئ واساسيات الجودة في الممارسة المهنية في مجال التخصص
 - ٦-١-٢ اساسيات واخلاقيات البحث العلمي

٢-٢ المهارات الذهنية :

- بأنتهاء دراسة برنامج الماجستير يجب ان يكون الخريج قادرا على :
- ١-٢-٢ تحليل وتقييم المعلومات في مجال التخصص والقياس عليها لحل المشاكل
 - ٢-٢-٢ حل المشاكل المتخصصة مع عدم توافر بعض المعطيات
 - ٣-٢-٢ الربط بين المعارف المختلفة لحل المشاكل المهنية
 - ٤-٢-٢ اجراء دراسة بحثية او كتابة دراسة علمية منهجية حول مشكلة بحثية
 - ٥-٢-٢ تقييم المخاطر في الممارسات المهنية في مجال التخصص
 - ٦-٢-٢ التخطيط لتطوير الاداء في مجال التخصص



٧-٢-٢ اتخاذ القرارات المهنية فى سياقات مهنية متنوعة

٣-٢ المهارات المهنية

- بانتهاه دراسة برنامج الماجستير يجب ان يكون الخريج قادرا على :
- ١-٣-٢ اتقان المهارات المهنية الاساسية والحديثة فى مجال التخصص
- ٢-٣-٢ كتابة وتقييم التقارير المهنية
- ٣-٣-٢ تقييم الطرق والادوات القائمة فى مجال التخصص

٤-٢ المهارات العامة والمنتقلة :

- بانتهاه دراسة برنامج الماجستير يجب ان يكون الخريج قادرا على :
- ١-٤-٢ التواصل الفعال بأنواعه المختلفة
- ٢-٤-٢ استخدام تكنولوجيا المعلومات بما يخدم الممارسة المهنية
- ٣-٤-٢ التقييم الذاتى وتحديد احتياجاته التعليمية
- ٤-٤-٢ استخدام المصادر المختلفة لحصول على المعلومات والمعارف
- ٥-٤-٢ وضع قواعد ومؤشرات تقييم اداء الاخرين
- ٦-٤-٢ العمل فى فريق سياقات كهنية مختلفة
- ٧-٤-٢ ادارة الوقت بكفاءة
- ٨-٤-٢ التعلم الذاتى والمستمر

ملحق ٣: مصفوفة مضاهاة المعايير القياسية للدراسات العليا للهيئة لدرجة الماجستير مع المعايير الأكاديمية المتبناة لبرنامج ماجستير الفسيولوجيا الطبيه

المعايير الأكاديمية المتبناة للبرنامج					المعايير الأكاديمية القياسية	مواصفات الخريج
المهارات العامة	المهارات المهنية	المهارات الذهنية	المعارف والفهم	مواصفات الخريج		
				١	١,١	
				٢	١,٢	
				٣	١,٣	
				٤	١,٤	
				٥	١,٥	
				٦	١,٦	
				٧	١,٧	
				٨	١,٨	
				٩	١,٩	
				١٠	١,١٠	
				١١	١,١١	
				١٢	١,١٢	



توصيف برنامج ماجستير الفسيولوجيا الطبيه



			2.a.1		٢,١,١	المعرفة والهم
			2.a.2		٢,١,٢	
			2.a.3		٢,١,٣	
			2.a.4		٢,١,٤	
			2.a.5		٥-١-٢	
			2.a.6		٦-١-٢	
			2.a.7			
			2.a.8			
		2.b.1			١-٢-٢	المهارات الذهنية
		2.b.2			٢-٢-٢	
		2.b.3			٣-٢-٢	
		2.b.4			٤-٢-٢	
		2.b.5			٥-٢-٢	
		2.b.6			٦-٢-٢	
		2.b.7			٧-٢-٢	
	2.c.1-2.c.2- 2.c.8-2.c.9				١-٣-٢	المهارات المهنية
	2.c.3-2.c.4- 2.c.5				٢-٣-٢	
	2.c.6-2.c.7				٣-٣-٢	
2.d.1					١-٤-٢	المهارات العامة والمنقولة
2.d.2					٢-٤-٢	
2.d.3					٣-٤-٢	
2.d.4					٤-٤-٢	
2.d.5					٥-٤-٢	
2.d.6					٦-٤-٢	
2.d.7					٧-٤-٢	
2.d.8					٨-٤-٢	



توصيف برنامج ماجستير الفسيولوجيه الطبيه

ملحق (٥) مصفوفة المعارف والمهارات للبرنامج الدراسي
(مصفوفة المقررات مع البرنامج)

المعارف Knowledge & Understanding								ILOs	
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 Courses	
	√		√	√				PHYS601	1 st part (pharmacology or biochemistry or pathology)
									medical physiology course includes the following:
		√					√	PHYS602	circulation-1
		√					√	PHYS7603	Kidney and body fluids-2
		√					√	PHYS604	Nervous system-3
		√					√	PHYS605	Endocrine system-4
		√					√	PHYS606	GIT and metabolism-5
	√		√			√	√	PHYS609	Practical-6
			√		√			PHYS607	Genetics and molecular biology or sport physiology or organ transplantation.
						√	√	PHYS611	Master Thesis



مهارات ذهنية Intellectual Skills								ILOs		
		2.b.7	2.b.6	2.b.5	2.b.4	2.b.3	2.b.2	2.b.1	Courses & codes Courses	
						√		√	PHYS601	1 st part (pharmacology or biochemistry or pathology)
										medical physiology course includes the following :
					√		√		PHYS602	circulation-1
					√		√		PHYS7603	Kidney and body fluids-2
					√		√		PHYS604	Nervous system-3
					√		√		PHYS605	Endocrine system-4
					√		√		PHYS606	GIT and metabolism-5
		√	√						PHYS609	Practical-6
						√	√	√	PHYS607	Genetics andmolecular biology or sport physiology and organ transplantation
				√					PHYS611	Master Thesis



توصيف برنامج ماجستير الفسيولوجيه الطبيه



Practical & Clinical Skills مهارات عملية ومهنية									ILOs	
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	Courses & codes Courses	
			√	√		√			PHYS601	1 st part (pharmacology or biochemistry or pathology)
										medical physiology course includes the following:
	√				√	√		√	PHYS602	circulation-1
				√					PHYS7603	Kidney and body fluids-2
√									PHYS604	Nervous system-3
		√					√		PHYS605	Endocrine system-4
√				√					PHYS606	GIT and metabolism-5
√	√	√	√	√	√	√	√	√	PHYS609	Practical-6
				√					PHYS607	Genetics and molecular biology or sport physiology and organ transplantation.
√	√	√	√	√	√	√	√	√	PHYS611	Master Thesis



توصيف برنامج ماجستير الفسيولوجيه الطبيه



مهارات عامة General and transferable									ILOs	Courses & codes Courses
2.d.8	2.d.7	2.d.6	2.d.5	2.d.4	2.d.3	2.d.2	2.d.1			
						√			PHYS601	1 st part (pharmacology or biochemistry or pathology)
										medical physiology course includes the following:
						√			PHYS602	circulation-1
						√			PHYS7603	Kidney and body fluids-2
						√			PHYS604	Nervous system-3
						√			PHYS605	Endocrine system-4
						√			PHYS606	GIT and metabolism-5
	√	√	√	√	√		√	√	PHYS609	Practical-6
						√			PHYS607	Genetics and molecular biology or sport physiology and organ transplantation
	√	√	√	√	√		√	√	PHYS611	Master Thesis



توصيف برنامج ماجستير الفسيولوجيا الطبيه

ملحق ٦ المقررات

جامعة بنها
كلية الطب البشرى
قسم الفسيولوجيا

توصيف مقرر الفسيولوجيا العامه

لماجستير الفسيولوجيا الطبيه

٢٠١٣-٢٠١٤

١-بيانات المقرر	
الفرقة / المستوى : ماجستير جزء اول	اسم المقرر : الفسيولوجيا العامه الرمز الكودي : PHYS 601
عدد الوحدات الدراسية : نظري 3 credit hours عملي 3 credit hours	التخصص : ماجستير الفسيولوجيا الطبيه
٢- هدف المقرر: 2.1. Gain Scientific knowledge essential for practice of general physiology according to the international standards 2.2. Gain skills necessary for applying scientific methods in field of medical physiology. 2.3. Behave ethical principles related to practice in general physiology. 2.4. Active participation in community need assessment and problem solving 2.5. Maintenance of learning ability necessary for continuous medical application 2.6. Maintenance of research interests and abilities	
٣-المستهدف من تدريس المقرر : <i>By the end of the course, the student should be able to :</i>	



<p>3.a.1. discuss according to priority the main functions of systems, organs and cells.</p> <p>3.a.2. Explain the basic and comprehensive physiological processes in correct medical terms and in correct order.</p> <p>3.a.3. identify important physiological laws and definitions of biophysics.</p> <p>3.a.4. Inumerate the different mechanisms of homeostasis and how to use it in basic physiology.</p> <p>3.a.5. Describe the regulation of the biophysics of all body systems .</p> <p>3.a.6. State the importance of membrane transport in homeostasis and how it help other systems in homeostasis</p>	<p>أ- المعلومات والمفاهيم :</p>
<p>3.b.1. Identify deviations from the normal physiology and its effects.</p> <p>3.b.2. Translate the consequences of physiological disorders into clinical manifestations and vice versa.</p> <p>3.b.3. Illustrate physiological information in the form of simplified diagrams with complete data on it.</p> <p>3.b.4. Interconnect different related branches of physiology to each other and to cell physiology.</p> <p>3.b.5. Analyze any disorders related to transport across membrane and all systems biophysics .</p> <p>3.b.6. Compare homologous physiological structures and processes for cell homeostasis.</p>	<p>ب- المهارات الذهنية:</p>
<p>3.c.1. Interpret all systems biophysics into physiological data</p> <p>3.c.2. Master of the basic and modern professional skills in dissection of lab animals and isolation of certain organs.</p> <p>3.c.3. Estimate vital variables in lab animals e.g.ECG and HR.</p> <p>3.c.4. Estimate certain physiological values and variables in human.</p> <p>3.c.5. Perform and use instruments and devices in evaluation of body systems</p> <p>3.c.6. Write physiological reports.</p>	<p>ج- المهارات المهنية الخاصة بالمقرر:</p>
<p>3.d.1. Continue learning and handle learning facilities with care.</p> <p>3.d.2. Present themselves in a good way.</p> <p>3.d.3. Use the sources of physiological information to remain current with the advances in knowledge & practice.</p> <p>3.d.4. participate in community development .</p> <p>3.d.5. Demonstrate the importance of keeping the environment balanced and clean.</p> <p>3.d.6. Communicate and cooperate with colleagues in an appropriate manner</p>	<p>د - المهارات العامة :</p>



Topics	Teaching hours (lectures)	Practical	Total	% of total	٤- محتوى المقرر:
<u>1st . part</u> General physiology <ul style="list-style-type: none">• cell physiology• Biophysics• Methods of transport across cell membrane• Homeostasis• Cell junctions	9h 9h 9h 9h 9h	27h 27h 27h 27h 27h	36h 36h 36h 36h 36h	33.3% 33.3% 33.3% 33.3% 33.3%	
1. Modified Lectures 2. Tutorial 3. Seminars					٥- أساليب التعليم والتعلم
		لا ينطبق			٦- أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة
٧- تقويم الطلاب :					
7.a.1. Written exams: to assess knowledge, understanding and intellectual skills. 7.a.2. practical: to assess knowledge and understanding, intellectual, practical and professional and General and transferable skills. 7.a.3. Structured oral exams (Viva cards): to assess knowledge and understanding, intellectual and General and transferable skills. Formative only assessment: simple research assignment, Log book, attendance and absenteeism, case study presentation and group project					أ- الأساليب المستخدمة
• Final exam in May or November					ب- التوقيت
• Written exam 50% • Oral exam 20% • practical 30 %					ج- توزيع الدرجات



٨- قائمة الكتب الدراسية والمراجع :

8.a department book for postgraduates	أ- مذكرات
8.b. Essential books (text books) 8.b.1. John E Hall (2006): guyton &hall physiology review. Eleventh edition. 8.b.2. Poul-Erik Paulev(2008): Medical Physiology And Pathophysiology Essentials and clinical problems. 8.b.3. William F Ganong (2003): review of medical physiology. Twenty – first edition.	ب- كتب ملزمة
8.c Recommended books: 8.c.1. John E Hall (2012): guyton &hall text book of medical physiology. twelfth edition. 8.c.2.Sembulingam K & Prema Sembulingam (2003): essentials of medical physiology .fourth edition.	ج- كتب مقترحة
8.d. Periodicals and Web Sites: <ul style="list-style-type: none">• www.jap.physiology.org.• www.physiologyonline.physiology.org/cgi/content	د – دوريات علمية أو نشرات



توصيف برنامج ماجستير الفسيولوجيا الطبيه



جامعة: بنها.

كلية : الطب البشري

قسم : الفسيولوجي

توصيف مقرر الكيمياء الحيويه

لماجستير الفسيولوجيا الطبيه

٢٠١٣-٢٠١٤

١- بيانات المقرر		
الفرقة / المستوى : master 1 st part	اسم المقرر : Medical Biochemistry	الرمز الكودي : PHYS 601.
<input type="checkbox"/>	عدد الوحدات الدراسية : ٦ ساعات معتمده	التخصص : الفسيولوجيا الطبيه
	نظري : ٣ عملي : ٣	

2.1. Provide all students with a broad education in fundamental aspects of medical biochemistry and molecular biology; 2.2. Enable the students to understand and explain the chemistry that underlies biochemical reactions and the techniques used to investigate them; 2.3. Understand the principles that determine the three-dimensional structure of biological macromolecules and be able to explain detailed examples of how structure enables function; 2.4. Illustrate the contribution of the organs in metabolic process under different physiological circumstances; 2.5. Provide a sound knowledge and understanding of the biochemical importance of macro-, micronutrients, hormones and enzymes;	٢- هدف المقرر :
	٣- المستهدف من تدريس المقرر :



<p>3.a.1.Describe the chemical and molecular basis that underlies biochemical reactions and the techniques used to investigate them;</p> <p>3.a.2.describe essential features of cell metabolism and its control, including topics such as energy, signal transduction and respiration;</p> <p>3.a.3.Describe the main metabolic pathways of the three main dietary sources of energy: carbohydrates, fats and proteins, their digestion, absorption & utilization;</p> <p>3.a.4.explain the regulation of these pathways and the integration of their metabolism;</p> <p>3.a.5.Illustrate basic principles of bioenergetics, their concerned metabolic pathways under different physiological circumstances and their integrator regulations with other working metabolic pathways;</p> <p>3.a.6.discuss the role of vitamins and enzymes required for catalysis of these processes, in addition to their deficiency manifestations;</p> <p>3.a.7.Point-out biochemical alteration in related metabolic disorders and their biochemical laboratory and clinical outcomes;</p>	<p>أ- المعلومات والمفاهيم :</p>
<p><i>By the end of the course, students should be able to</i></p> <p>3.b.1.Integrate and evaluate information;</p> <p>3.b.2. evaluate suitable experimental methods for the investigation of relevant areas of biochemistry and molecular biology;</p> <p>3.b.3.Analyze and solve biochemistry-based problems;</p> <p>3.b.4. Interpret medical laboratory reports.</p>	<p>ب- المهارات الذهنية:</p>



<p><i>By the end of the course, students should be able to:</i></p> <p>3.c.1.Plan and execute safely a series of experiments</p> <p>3.c.2.Use laboratory methods to generate data;</p> <p>3.c.3.Analyze experimental results and determine their strength and validity;</p> <p>3.c.4.Prepare technical reports;</p> <p>3.c.5.Give technical presentations;</p> <p>3.c.6. Perform chemical tests to detect abnormal constituents of blood and urine.</p> <p>3.c.7. Perform & interpret kidney and liver function tests.</p> <p>3.c.8. Assess serum glucose and lipid profile.</p> <p>3.c.9.extract DNA according to the basic principles of further techniques using extracted DNA.</p>	<p>ج- المهارات المهنية الخاصة بالمقرر :</p>
<p><i>By the end of the course, students should be able to:</i></p> <p>3.d.1.Communicate properly with the staff members;</p> <p>3.d.2.Respect the rules of laboratory work;</p> <p>3.d.3.Learn effectively for the purpose of continuing professional development;</p> <p>3.d.4.Communicate effectively through oral presentations, computer processing and written reports;</p> <p>3.d.5.Use Information and Communications Technology;</p>	<p>د - المهارات العامة :</p>



Contents	Lectures(hrs)	Practical	Total	% of total
Carbohydrate metabolism	5h	10h	15h	8.3%
Lipid metabolism	5h	10h	15h	8.3%
Protein metabolism	5h	10h	15h	8.3%
Hormones, vitamins, enzymes & minerals metabolism	7h	13h	20h	11.11%
Basic principals of muscle , GIT biochemistry	7h	13h	20h	11.11%
Basic principals of liver & kidney biochemistry.	7h	13h	20h	11.11%
Basic principals of nervous tissue biochemistry.	7h	13h	20h	11.11%
Recombinant DNA Technology	7h	13h	20h	11.11%
Tumor markers	5h	10h	15h	8.3%
Body fluids	7h	13h	20h	11.11%
Total			180hs	

٤- محتوى المقرر:



5.1.Modified lectures (with AV aids). 5.2.Tutorials and small group discussion. 5.3.Practical classes: 5.4.Spectrophotometry. 5.5. Biochemical laboratory report comments.	٥- أساليب التعليم والتعلم
لا ينطبق	٦- أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة
٧- تقويم الطلاب :	
7.a.1. Written exams: to assess knowledge, understanding and intellectual skills. 7.a.2. practical: to assess knowledge and understanding, intellectual, practical and professional and General and transferable skills. 7.a.3. Structured oral exams (Viva cards): to assess knowledge and understanding, intellectual and General and transferable .skills	أ- الأساليب المستخدمة
7.b.1- Final exam (6 months after registration)	ب- التوقيت
7.c.1-Written exam: 50% 7.c.2-Oral exam: 25% 7.c.3- Practical exam: 25%	ج- توزيع الدرجات
٨- قائمة الكتب الدراسية والمراجع :	
8.a.Main Books: Department book (available for students to purchase from different bookshops at the faculty).	أ- مذكرات
8.b.Essential books: Harper's Biochemistry by: Roberk K. Murray, Daryl K. Granner, Peter A. Mayes and Victor W. Rodwell.	ب- كتب ملزمة
8.c.Recommended Books: Lippincott's illustrated Biochemistry (2006).	ج- كتب مقترحة
8.d.Periodical websites: www.clinchem.org	د - دوريات علمية أو نشرات ... الخ

أستاذ المادة : اد-امال ابو الفضل

رئيس مجلس القسم العلمي : اد-امال ابو الفضل



توصيف برنامج ماجستير الفسيولوجيا الطبيه



جامعة: بنها

كلية : الطب البشري

قسم : الفسيولوجي

توصيف مقرر الباثولوجي
لماجستير الفسيولوجيا الطبيه
٢٠١٣-٢٠١٤

١- بيانات المقرر		
الفرقة / المستوى : master 1 st part	اسم المقرر : Medical pathology	الرمز الكودي : PHYS 601
<input type="checkbox"/>	عدد الوحدات الدراسية : ٦ ساعات معتمده	التخصص : الفسيولوجيا الطبيه
	نظري: ٣ عملي: ٣	

<p>2.1 Providing basic and specialized services in relation with biopsy diagnosis in the practice of medicine and investigations.</p> <p>2.2 Diagnosis of practical problems as cases study and clinical assessments</p> <p>2.3 Having fundamental knowledge of medical disciplines related to their clinical applications & able to use different technological tools as computer in the field of general medicine</p> <p>2.4 Having acquired competency to be teacher, trainer, researcher and leader in the field.</p> <p>2.5 Development of recent tools & ways essential for medical practice for progress of society.</p>	<p>٢- هدف المقرر :</p>
<p>٣- المستهدف من تدريس المقرر :</p> <p><i>By the end of the course, students should be able to</i></p>	



- 3.a.1 Describe the dissection of different types of biopsies.
- 3.a.2 identify the laws in relation to the practical work, medical practice and be acquainted with related relevant amendments and also related judgments passed by constitutional courts
- 3.a.3 describe the clinical manifestations and differential diagnosis of common pathological cases.
- 3.a.4 explain the scientific basis and interpretation of various diagnostic modalities essential for general medicine
- 3.a.5 Identify the principles that govern ethical decision making in clinical practice as well as the pathological aspect of medical malpractice.
- 3.a.6 Mention ethics of medical research and recognize the importance of life-long self-learning required for continuous professional development.
- 3.a.7 identify basic knowledge & theories needed to support literature retrieval and further research capabilities.

أ- المعلومات
والمفاهيم :



<p><i>By the end of the course, students should be able to</i></p> <p>3.b. 1 relate the laws to the practical work, medical practice and be acquainted with related relevant amendments and also related judgments passed by constitutional courts.</p> <p>3.b. 2 Evaluate the risky problems that could be met during taking biopsies.</p> <p>3.b. 3 Combine the clinical and investigational database to be proficient in clinical problem solving.</p> <p>3.b. 4 Plan for performance development in his practice.</p> <p>3.b. 5 Select the most appropriate and cost effective diagnostic procedures for each problem.</p> <p>3.b. 6 Formulate of research hypothesis & questions.</p> <p>3.b. 7 Adopt the questioning approach to own work & that of others to solve clinical problems</p>	<p>ب- المهارات الذهنية:</p>
<p><i>By the end of the course, students should be able to:</i></p> <p>3.c. 1 diagnose and evaluate of cases and investigation.</p> <p>3.c. 2 Interpret all important pathological aspects for early cancer detection and assessment.</p> <p>3.c. 3 Diagnose and manage different cases</p> <p>3.c. 4 Interpret cancer assessment, cytological and immune-histochemical reports.</p> <p>3.c. 5 Apply different technical skills in his special practice.</p>	<p>ج- المهارات المهنية الخاصة بالمقرر :</p>
<p><i>By the end of the course, students should be able to:</i></p> <p>3.d. 1- put rules & regularities for evaluation of performance of others.</p> <p>3.d. 2 Establish life-long self-learning required for continuous professional development</p> <p>3.d. 3 Use the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.</p> <p>3.d. 4 Do self-criticism..</p> <p>3.d. 5 Retrieve, manage, and manipulate information by all means, including electronic means.</p>	<p>د - المهارات العامة :</p>



توصيف برنامج ماجستير الفسيولوجيه الطبيه



Contents	Lectures(hrs)	Practical	Total	% of total
Carbohydrate metabolism	5h	10h	15h	8.3%
Lipid metabolism	5h	10h	15h	8.3%
Protein metabolism	5h	10h	15h	8.3%
Hormones, vitamins, enzymes & minerals metabolism	7h	13h	20h	11.11%
Basic principals of muscle , GIT biochemistry.	7h	13h	20h	11.11%
Basic principals of liver & kidney biochemistry.	7h	13h	20h	11.11%
Basic principals of nervous tissue biochemistry.	7h	13h	20h	11.11%
Recombinant DNA Technology	7h	13h	20h	11.11%
Tumor markers	5h	10h	15h	8.3%
Body fluids	7h	13h	20h	11.11%
Total			180hs	

٤- محتوى المقرر:



5. 1 General lectures & interactive learning: 5. 2 Small group discussions and case studies 5. 3 Practical sessions a- Histopathology slide lab b- Museum of pathology.	٥- أساليب التعليم والتعلم
لا ينطبق	٦- أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة
٧- تقويم الطلاب :	
7.a.1. Written exams: to assess knowledge, understanding and intellectual skills. 7.a.2. Clinical exams(OSCE): to assess knowledge and understanding, intellectual, practical and professional and General and transferable skills. 7.a.3. Structured oral exams (Viva cards): to assess knowledge and understanding, intellectual and General and transferable skills	أ- الأساليب المستخدمة
7-b. Final exam (6 months after registration)	ب- التوقيت
7.c. 1-Written exam: 50% 2-Oral exam: 25% 3- Practical exam: 25%	ج- توزيع الدرجات
٨- قائمة الكتب الدراسية والمراجع :	
8-a.Course notes 1- Departmental books of General and Special histopathology, available in secretary office. 2- Handouts updated, administered by staff members 3- Museum notebook. 4- CDs for histopathological slides and museum specimens are available at the department.	أ- مذكرات



توصيف برنامج ماجستير الفسيولوجية الطبية

8.b-Essential books (text books) - Rosai and Ackerman's Surgical Pathology Juan Rosai, Mosby 2004 - Sternberg's Diagnostic surgical Pathology 4 ^U edition, Lippincott Williams and Wilkins	ب- كتب ملزمة
8.c Recommended Books: Kumar V ,Abbas AK ,Fausto N:Robbins and Cotran Pathologic Basis of Disease ,7 th ed.;2005, Elsevier Saunders. Available at faculty bookshops & main library.	ج- كتب مقترحة
8.d.Periodical websites: hyperlink http://www.gw http://umc.edu/dept/path/2 umc.edu/dept/path/2F	د - دوريات علمية أو نشرات ... الخ

أستاذ المادة : أ.د. سامية يوسف

رئيس مجلس القسم العلمي : ا.دا عبد اللطيف البلشي



توصيف برنامج ماجستير الفسيولوجية الطبيه



جامعة: بنها

كلية : الطب البشري

قسم : الفسيولوجي

توصيف مقرر الفارماكولوجي

لماجستير الفسيولوجيا الطبيه

٢٠١٣-٢٠١٤

١- بيانات المقرر		
الفرقة / المستوى : master 1 st part	اسم المقرر : Medical pharmacology	الرمز الكودي : PHYS 601.
<input type="checkbox"/>	عدد الوحدات الدراسية: 6 credit hours نظري 3 credit hours عملي 3 credit hours	التخصص : الفسيولوجيا الطبيه

2.1. Development of a physician who has the appropriate level of knowledge and 2.2. skills in clinical pharmacology and therapeutics. 2.3. Development of postgraduate student with new skills related to future drug 2.4. development research and clinical trials. 2.5. Optimize clinical application of drugs in medical practice. 2.6. Integrate the knowledge of clinical pharmacology to optimize clinical 2.7. Get proficiency in problem solving, experimental design, and evaluation of data of clinical trials involving pharmacotherapy.	٢- هدف المقرر :
٣- المستهدف من تدريس المقرر :	



<p><i>By the end of the course, students should be able to</i></p> <p>3.a.1. Describe principles of drug-receptor interaction, pharmacodynamics, and Pharmacokinetics.</p> <p>3.a.2. Identify and outline the mechanism of action of drugs at the molecular and sub-cellular levels.</p> <p>3.a.3. Recall and reproduce principles of route of administration, drug absorption, distribution and metabolism.</p> <p>3.a.4. Describe different trial designs, principles of research ethics and medicolegal</p> <p>3.a.5. Discuss important drug adverse reactions.</p> <p>3.a.6. Discuss important mechanism of action of overdose or toxicity and explain how to manage</p> <p>3.a.7 Illustrate basic principles of pharmacology, under different physiological circumstances .</p>	<p>أ- المعلومات والمفاهيم :</p>
<p><i>By the end of the course, students should be able to</i></p> <p>3.b.1. Integrate and evaluate information;</p> <p>3.b.2. evaluate suitable experimental methods for the investigation of relevant areas of pharmacology</p> <p>3.b.3. Analyze and solve pharmacology based problems;</p> <p>3.b.4. Interpret medical laboratory reports.</p>	<p>ب- المهارات الذهنية:</p>



<p><i>By the end of the course, students should be able to:</i></p> <p>3.c.1. Provide appropriate consultation in different clinical situations.</p> <p>3.c.2. Apply principles of individualization of therapy when necessary.</p> <p>3.c.3. Predict the possibility that clinical events are drug-related.</p> <p>3.c.4. Construct and adjust dose regimes correctly.</p> <p>3.c.5. Practice experimental work on isolated animal tissues and living animals to</p> <p>3.c.6. understand principles of biological responses of diseases to different pharmacological drugs.</p> <p>3.c.7. Plan and execute safely a series of experiments;</p> <p>3.c.8. Give technical presentations and reports</p> <p>3.c.9. Recognize the effect of drugs on isolated organs.</p>	<p>ج- المهارات المهنية الخاصة بالمقرر :</p>
<p><i>By the end of the course, students should be able to:</i></p> <p>3.d.1. Communicate properly with the staff members;</p> <p>3.d.2. Respect the rules of laboratory work;</p> <p>2.d.1. Learn effectively for the purpose of continuing professional development;</p> <p>3.d.3. Communicate effectively through oral presentations, computer processing and written reports;</p> <p>3.d.4. Use Information and Communications Technology;</p> <p>3.d.5. work independently and as part of a group, and to develop presentation skills both written and oral;</p> <p>3.d.6. Integrate and evaluate information from a variety of sources;</p> <p>3.d.7. Learn independently with open-mindedness and critical enquiry;</p>	<p>د - المهارات العامة :</p>



توصيف برنامج ماجستير الفسيولوجية الطبية



Contents	Lectures(hrs)	Practical	Total	% of total	٤- محتوى المقرر:
General pharmacology	10h	20h	30h	16.7%	
Neurotransmitters	7h	13h	20h	11.11%	
Drugs modifying physiological functions	7h	13h	20h	11.11%	
Drug induced diseases	7h	13h	20h	11.11%	
Drugs as tools for inducing experimental diseases in animal models	10h	20h	30h	16.7%	
Isolated organ preparations .	10h	20h	30h	16.7%	
Experiments on intact preparations	10h	20h	30h	16.7%	
Total			180hs		
<ol style="list-style-type: none"> 1. Modified lectures (with AV aids). 2. Tutorials and small group discussion. 3. Practical classes: <ol style="list-style-type: none"> 3.1. Spectrophotometry. 3.2. Biochemical laboratory report comments. 					
لا ينطبق					٦- أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة
					٧- تقويم الطلاب :
<p>7.a.1. Written exams: to assess knowledge, understanding and intellectual skills.</p> <p>7.a.2. practical exams(OSCE): to assess knowledge and understanding, intellectual, practical and professional and General and transferable skills.</p> <p>7.a.3. Structured oral exams (Viva cards): to assess knowledge and understanding, intellectual and General and transferable skills</p>					أ- الأساليب المستخدمة



7.b. Final exam (6 months after registration)	ب- التوقيت
7-c 1-Written exam: 150 marks 50% 2-Oral exam: 75 marks 25% 3- Practical exam: marks 25%	ج- توزيع الدرجات
٨- قائمة الكتب الدراسية والمراجع :	
8.a.Main Books: Department book (available for students to purchase from different bookshops at the faculty).	أ- مذكرات
8.b. Principles of Drug Development for Johns Hopkins University(2007). -A Text book of Pharmacology and Therapeutics for Arthur Robertson Cushny (2010). -Pharmacotherapy for Pharmacotherapy(2003).	ب- كتب ملزمة
8.c.Recommended Books: Lippincott's illustrated pharmacology (2007).	ج- كتب مقترحة
8.d.Periodical websites: www.jpharmacol.com ▪ www.degruyter.com/view/j/jbcpp	د - دوريات علمية أو نشرات ... الخ

أستاذ المادة: Prof. Dr. Ahmed Selem

رئيس مجلس القسم العلمي :

Prof. Dr. Ahmed Selem



توصيف برنامج ماجستير الفسيولوجيا الطبيه



جامعة: بنها

كلية : الطب البشرى

قسم : الفسيولوجى

توصيف مقرر الفسيولوجيا الطبيه

لماجستير الفسيولوجيا الطبيه (٢٠١٣ - ٢٠١٤)

١- بيانات المقرر		
الفرقة / المستوى : master 2 nd part	اسم المقرر : medical physiology	الرمز الكودي : includes PHYS602 (PHYS602- PHYS603- PHYS604- PHYS605- PHYS606- PHYS608,610,611
<input type="text"/>	عدد الوحدات الدراسية : ١٠ ساعات معتمده	التخصص: الفسيولوجيا الطبيه
5 credit hours عملي	5 credit hours نظري	



<p>2.1. Facilitate understanding the clinical data for the graduates in the clinical practice.</p> <p>2.2. Develop skills associated with improved teaching and research.</p> <p>2.3. activate and improve the role of staff members in research projects in collaboration with research centers and other organizations.</p> <p>2.4. Establish basic scientific knowledge essential for following the rules of medical ethics.</p> <p>2.5. Make diagnostic, problem solving and decision making as well as communication skills necessary for proper evaluation and management of health problems.</p> <p>2.6. Appropriate ethical and professional education necessary for demonstrating appropriate attitudes with students and colleagues.</p>	<p>٢- هدف</p> <p>المقرر :</p>
<p>٣- المستهدف من تدريس المقرر :</p>	



<p><i>By the end of the course, graduates should be able to</i></p> <p>3.a.1 describe according to priority the main functions of systems, organs and cells.</p> <p>3.a.2 Explain the basic physiological processes in correct medical terms and in correct order.</p> <p>3.a.3 Memorize important physiological definitions and laws.</p> <p>3.a.4 discuss the different mechanisms of homeostasis and how to use it in applied physiology.</p> <p>3.a.5 provide excellence in medical education and research</p> <p>3.a.6 explain the mutual influence between professional practice and its impacts on the environment.</p> <p>3.a.7 identify the basics and ethics of scientific research.</p> <p>3.a.8 Describe the normal structure and function of the human body and mind at the level of its system.</p> <p>3.a.9 Describe the normal structure and function of the human body and mind at the molecular, biochemical, cellular, levels to maintain the body homeostasis.</p>	<p>أ- المعلومات والمفاهيم :</p>
<p><i>By the end of the course, graduates should be able to</i></p> <p>3.b.1 Identify deviations from the normal physiology and its effects.</p> <p>3.b.2 Illustrate physiological information in the form of simplified diagrams with complete data on it.</p> <p>3.b.3 Interconnect different branches of physiology to each other and to other branches of medicine.</p> <p>3.b.4 Analyze any physiological curve.</p> <p>3.b.5 Compare homologous physiological structures and processes.</p>	<p>ب- المهارات الذهنية:</p>



<p><i>By the end of the course, graduates should be able to:</i></p> <p>3.c.1 Perform efficiently the appropriate steps and procedures in measuring pulse, respiratory rate and arterial blood pressure.</p> <p>3.c.2 Perform simple experimental blood tests and the use of this data in problem solving.</p> <p>3.c.3 Read a normal ECG paper</p> <p>3.c.4 interpret different laboratory tests as isolated perfused heart</p> <p>3.c.5 Asses pulmonary function tests</p> <p>3.c.6 Record cardiovascular parameters in animals under various conditions.</p> <p>3.c.7 Asses skeletal and smooth muscle contraction</p> <p>3.c.8 Perform blood tests.</p> <p>3.c.9 Demonstrate the macroscopic and microscopic criteria of the altered structures and functions of the body and its major organ systems that are seen in various diseases and conditions.</p> <p>3.c.10 Perform tests showing the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.</p>	<p>ج- المهارات المهنية الخاصة بالمقرر :</p>
<p><i>By the end of the course, graduates should be able to:</i></p> <p>3.d.1 Show appropriate manners when working in a lab and cooperation with his colleges and respect towards general property and how to handle learning facilities with care.</p> <p>3.d.2 Deal properly and cautiously in a lab.</p> <p>3.d.3 Use the sources of biomedical information to remain current with the advances in knowledge & practice.</p> <p>3.d.4 Participate in community development and in drawing up and implementing development policies and plans.</p>	<p>د - المهارات العامة :</p>



توصيف برنامج ماجستير الفسيولوجية الطبية

Contents	Lectures(hrs)	practical	Total	% of total	٤ - محتوى المقرر :
cardiovascular system	30h	90h	120h	20%	
Urinary system and body water	30h	90h	120h	20%	
Nervous system	30h	90h	120h	20%	
Endocrine system	30h	90h	120h	20%	
Gastrointestinal system	30h	90h	120h	20%	
Total			600hs	100%	
5 methods used 5-1.General lectures 5.2. Practical sessions in the department lab. 5.3.-seminares 5.4-confrences					٥ - أساليب التعليم والتعلم
Rotatory exams for assessment of the graduates.					٦ - أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة
					٧ - تقويم الطلاب :
7.a.1. Written exams: to assess knowledge, understanding and intellectual skills. 7.a.2. practical exams: to assess knowledge and understanding, intellectual, practical and professional and General and transferable skills. 7.a.3. Structured oral exams (Viva cards): to assess knowledge and understanding, intellectual and General and transferable skills Formative only assessment: simple research assignment, Log book, attendance and absenteeism, case study presentation and group project					أ - الأساليب المستخدمة



1- Final exam (6 months after registration)	ب- التوقيت
1-Written exam: 50% 2-Oral exam: 25% 3- Practical exam: 25%	ج- توزيع الدرجات
٨- قائمة الكتب الدراسية والمراجع :	
8.a Department book for post graduates	أ- مذكرات
8.b Essential books (text books) 8.b.1 John E Hall (2006): guyton&hall physiology review. Eleventh edition. 8.b.2 Poul-Erik Paulev(2008): Medical Physiology And Pathophysiology Essentials and clinical problems. 8.b.3 William F Ganong (2003): review of medical physiology. Twenty – first edition.	ب- كتب ملزمة
8.c Recommended books: 8.c.1 John E Hall (2012): guyton&hall text book of medical physiology.twelfth edition. 8.c.2 Sembulingam K &Prema Sembulingam (2003): essentials of medical physiology .fourth edition.	ج- كتب مقترحة
8.D.Periodical websites: www.jap.physiology.org www.physiologyonline.physiology.org/cgi/content	د - دوريات علمية أو نشرات ... الخ

أستاذ المادة : د- نهي ابراهيم حسين

رئيس مجلس القسم العلمي : اد- علاء الدين عبدالعزيز التليس



توصيف برنامج ماجستير الفسيولوجيا الطبيه



جامعة: بنها
كلية: الطب البشرى
قسم : الفسيولوجيا الطبيه

Molecular biology and genetics
For master in medical Physiology Year 2013 - 2014

١- بيانات المقرر		
الرمز الكودي : (PHYS607)	اسم المقرر : Molecular biology and genetics	المستوى : ماجستير جزء ثاني
التخصص : master in medical Physiology	عدد الوحدات الدراسية : ٢ نظري ١ عملي ١ ساعات معتمدة	
٢- هدف المقرر :	2- Overall Aims of Course 2.1 Provide all students with a broad education in fundamental aspects of genetics and molecular biology; 2.3 Understand the principles that determine the three-dimensional structure of biological macromolecules and be able to explain detailed examples of how structure enables function; 2.4 Illustrate the contribution of the organs in metabolic process under different physiological circumstances; 2.5 Provide a sound knowledge and understanding of the biochemical importance of macro-, micronutrients, hormones and enzymes; 2.6 Acquire a critical understanding of the molecular basis of genetics . 2.7 Be able to devise suitable experimental methods for the investigation of relevant areas of biochemistry and molecular biology	
٣- المستهدف من تدريس المقرر : <i>By the end of the course, graduates should be able to:</i>		



<p>3.a.1 Describe the chemical and molecular basis that underlies biochemical reactions and the techniques used to investigate them;</p> <p>3.a.2 describe essential features of cell metabolism and its control, including topics such as energy, signal transduction and respiration;</p> <p>3. a.3 Describe the main metabolic pathways of the three main dietary sources of energy: carbohydrates, fats and proteins, their digestion, absorption & utilization;</p> <p>3. a.4 identify the basic knowledge for understanding the regulation of these pathways and the integration of their metabolism;</p> <p>3. a.5 Illustrate basic principles of bioenergetics, their concerned metabolic pathways under different physiological circumstances and their integrator regulations with other working metabolic pathways;</p> <p>3. a. 6 explain the role of vitamins and enzymes required for catalysis of these processes, in addition to their deficiency manifestations;</p> <p>3. a. 7 Point-out biochemical alteration in related metabolic disorders and their biochemical laboratory outcomes;</p>	<p>أ- المعلومات والمفاهيم:</p>
<p>3.b.1 Integrate and evaluate information;</p> <p>3.b.2 select suitable experimental methods for the investigation of relevant areas of biochemistry and molecular biology;</p> <p>3.b.3 Analyze biochemistry-based problems;</p> <p>3.b.4 Interpret medical laboratory reports.</p>	<p>ب- المهارات الذهنية:</p>
<p>3.c. 1 employ safely a series of experiments</p> <p>3.c. 2 Use laboratory methods to generate data;</p> <p>3.c. 3 Analyze experimental results and determine their strength and validity;</p> <p>3.c. 4 Prepare technical reports;</p> <p>3.c. 5 Give technical presentations;</p> <p>3.c. 6 Perform chemical tests to detect abnormal constituents of blood and urine.</p> <p>3.c. 7 Perform kidney and liver function tests.</p> <p>3.c. 8 Assess serum glucose and lipid profile.</p> <p>3.c. 9 extract DNA according the basic principles of further techniques using extracted DNA.</p>	<p>ج- المهارات المهنية الخاصة بالمقرر:</p>



- 3.d. 1 Communicate properly with the staff members; through oral presentations, computer processing and written reports
3.d. 2 Respect the rules of laboratory work;
3.d. 3 Learn effectively for the purpose of continuing professional development;
3.d. 4 Analyze biochemical information from a variety of sources, including reviews and original research, and to communicate the principles both orally and in writing (e.g. essays, laboratory reports) in a well organized way.
3.d. 5 Use Information and Communications Technology;
3.d. 6 work independently and as part of a group, and to develop presentation skills both written and oral;
3.d. 7 Integrate information from a variety of sources;
3.d. 8 Learn independently with open-mindedness and critical enquiry;

د -
المهارات
العامة:

٤ - محتوى
المقرر:

Contents	Lectures	Practical	Total	% Of total
Nucleic Acids	5hs	15hs	20hs	16.7%
DNA damage & repair	5hs	15hs	20hs	16.7%
Gene expression regulation	5hs	15hs	20hs	16.7%
Recombinant DNA Technology	5hs	15hs	20hs	16.7%
Cell cycle & apoptosis.	2.5hs	7.7hs	10hs	8.3%
Tumor markers	2.5hs	7.5hs	10hs	8.3%
Fundamentals of DNA extraction	5hs	15hs	20hs	16.7%

- 5.1 General lectures
5.2 Practical sessions in the department lab.
5.3 seminars
5.4 conferences

٥ - أساليب
التعليم والتعلم

٦ - أساليب التعليم والتعلم للطلاب ذوي
القدرات المحدودة



٧- تقويم الطلاب :

7.1. Modified lectures (with AV aids). 7.2Tutorials and small group discussion. 7.3 Practical classes: 7.4 Spectrophotometry. 7.4. Biochemical laboratory report comments.	أ- الأساليب المستخدمة
7.b Only by final Exam: written, oral and practical examinations	ب- التوقيت
7.c. Final-term written examination 50% Oral examination 25% Practical examination 25%	ج- توزيع الدرجات
٨ قائمة الكتب الدراسية والمراجع :	
8.a Course Notes: <ul style="list-style-type: none">Lectures notes prepared by staff members in the department (20١١) .	أ- مذكرات
8.b. Essential Books (Text Books) <ul style="list-style-type: none">Harper's Biochemistry by: Roberk K. Murray, Daryl K. Granner, Peter A. Mayes and Victor W. Rodwell (2008).	ب- كتب ملزمة
8.c. Recommended Books Lippincott's illustrated Biochemistry (2007).	ج- كتب مقترحة
8.d. Periodicals and Web Sites: www.clinchem.org	د - دوريات علمية أو نشرات

أستاذ المادة: ا.د. امال ابو الفضل
رئيس مجلس القسم العلمي : ا.د. امال ابو الفضل

التاريخ : ٨ / ٩ / ٢٠١٣

التوقيع



توصيف برنامج ماجستير الفسيولوجيا الطبيه



جامعة: بنها
كلية: الطب البشرى
قسم : الفسيولوجيا الطبيه

Organ transplantation For master in medical Physiology Year 2013 - 2014

١- بيانات المقرر		
المستوى : ماجستير جزء ثاني	اسم المقرر : Organ transplantation	الرمز الكودي : (PHYS708)
عدد الوحدات الدراسية : ٤ نظري ٢ عملي ٢ ساعات معتمدة	التخصص : medical Physiology medical Physiology	
2- Overall Aims of Course 2. 1. Approach the detailed knowledge of human physiology and how to use in organ transplantation. 2.2. Practice medicine at the primary level of health, dealing with health problems commonly met- within clinical practice. 2.3. Create Basic scientific knowledge essential for following the rules of medical ethics. 2.4. Learn problem solving and decision making as well as communication skills necessary for proper evaluation and management of health problems. 2.5. Research education as related to medical practice & post graduation development		٢- هدف المقرر :
٣- المستهدف من تدريس المقرر :		
By the end of the course, students should be able to: 3.a.1 Discuss briefly the indications of organ transplantation. 3.a.2- Explain the basic knowledge about blood transfusion. 3.a.3- identify important physiologic information about liver and kidney transplantation. 3.a.4-describe the different mechanisms of homeostasis and auto regulation of transplanted organs. 3.a.5- provide proficiency in medical education and research concerning tests done before organ transplantation. 3.a.6 Describe the normal structure and function of the cardiac muscle and asses its contraction by adding drugs.		أ- المعلومات والمفاهيم:



<p>3.b.1- Identify deviations from the normal physiology and its effects on transplanted organs.</p> <p>3.b.2- interpret physiological information in the form of simplified diagrams with complete data on it.</p> <p>3.b.3- Interconnect different branches of physiology to organ transplantation.</p> <p>3.b.4- Analyze tests done before organ transplantation (ABO grouping , MHC typing, etc.....).</p> <p>3.b.5- design Comparison between homologous physiological structures and processes in normal organs and transplanted organs .</p> <p>3.b.6- summarize updated physiological information related to organ transplantation physiology.</p>	<p>ب- المهارات الذهنية:</p>																																													
<p>By the end of the courses the graduate should be able:</p> <p>3. c.1perform efficiently tests done for assessment of body functions in health and disease e.g. (ABO grouping and MHC typing)</p> <p>3.c.2Master of the basic and modern professional skills in dissection of lab animals and isolation of muscles.</p> <p>3.c.3. prevent graft host reaction.</p> <p>3.c.4- Demonstrate the macroscopic and microscopic criteria of the altered structures and functions of the organs seen in various conditions.</p>	<p>ج- المهارات المهنية الخاصة بالمقرر :</p>																																													
<p>3.d.1- deal properly and cautiously in a lab</p> <p>3.d.2- Use the sources of biomedical information to remain current with the advances in knowledge & practice.</p> <p>3.d.3-participate in community development and in drawing up and implementing development policies and plans.</p>	<p>د - المهارات العامة :</p>																																													
<table border="1"> <thead> <tr> <th>Contents</th> <th>Lectures</th> <th>Practical</th> <th>total</th> <th>% of Total</th> </tr> </thead> <tbody> <tr> <td>Blood transfusion, cardiac and renal transplantation</td> <td>5hs</td> <td>15hs</td> <td>20hs</td> <td>16.7%</td> </tr> <tr> <td>Bone marrow and liver transplantation</td> <td>5hs</td> <td>15hs</td> <td>20hs</td> <td>16.7%</td> </tr> <tr> <td>Tests done before organ transplantation</td> <td>5hs</td> <td>15hs</td> <td>20hs</td> <td>16.7%</td> </tr> <tr> <td>Auto regulation of transplanted organs</td> <td>5hs</td> <td>15hs</td> <td>20hs</td> <td>16.7%</td> </tr> <tr> <td>How to prevent graft rejection</td> <td>2.5hs</td> <td>7.5hs</td> <td>10hs</td> <td>16.6%</td> </tr> <tr> <td>Types of graft rejection</td> <td>2.5hs</td> <td>7.5hs</td> <td>10hs</td> <td>8.3%</td> </tr> <tr> <td>Graft versus host reaction</td> <td>5hs</td> <td>15hs</td> <td>20hs</td> <td>8.3%</td> </tr> <tr> <td>Total</td> <td>30</td> <td>90</td> <td>120</td> <td>100%</td> </tr> </tbody> </table>	Contents	Lectures	Practical	total	% of Total	Blood transfusion, cardiac and renal transplantation	5hs	15hs	20hs	16.7%	Bone marrow and liver transplantation	5hs	15hs	20hs	16.7%	Tests done before organ transplantation	5hs	15hs	20hs	16.7%	Auto regulation of transplanted organs	5hs	15hs	20hs	16.7%	How to prevent graft rejection	2.5hs	7.5hs	10hs	16.6%	Types of graft rejection	2.5hs	7.5hs	10hs	8.3%	Graft versus host reaction	5hs	15hs	20hs	8.3%	Total	30	90	120	100%	<p>هـ - محتوى المقرر:</p>
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	٦- أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة
	٧- تقويم الطلاب :
7.1..written 7.2oral 7.3 Practical	أ- الأساليب المستخدمة
7.b Only by final Exam: written, oral and practical examinations	ب- التوقيت
7.c. Final-term written examination 50% Oral examination 25% Practical examination 25%	ج- توزيع الدرجات
	٨ قائمة الكتب الدراسية والمراجع :
8.a Course Notes: non	أ- مذكرات
8.b. Essential Books (Text Books) -Textbook of Organ Transplantation Set (Editor), <u>Stuart J. Knechtle</u> (Editor), <u>Christian P. Allan D. Kirk Larsen</u> (Editor), <u>Joren C. Madsen</u> (Editor), <u>Thomas C. Pearson</u> (Editor), <u>Steven A. Webber</u> (Editor) ISBN: 978-1-118-87014-3September 2014, Wiley-Blackwel - Organ Transplantation Leo C. Ginns, MD, A. Benedict Cosimi, Peter J. Morris, MB, PhD, FRS, Jun 9, 1999	ب- كتب ملزمة
8.c. Recommended Books Lippincott's illustrated Biochemistry (2007).	ج- كتب مقترحة
8.d. Periodicals and Web Sites: www.clinchem.org	د - دوريات علمية أو نشرات

أستاذ المادة : د/ نهى ابراهيم حسين رئيس مجلس القسم العلمي : ا.د. علاء الدين عبد العزيز التليس

التوقيع نهى ابراهيم حسين

التاريخ : ٨ / ٩ / ٢٠١٣



توصيف برنامج ماجستير الفسيولوجيا الطبيه



جامعة: بنها
كلية: الطب البشرى
قسم : الفسيولوجيا الطبيه

Sport physiology
For master in medical Physiology Year 2013 - 2014

١- بيانات المقرر		
المستوى : ماجستير جزء ثاني	اسم المقرر : Sport physiology	الرمز الكودي : (PHYS607)
نظري 1	عدد الوحدات الدراسية : ٢ عملي 1 ساعات معتمدة	التخصص : medical Physiology
2- Overall Aims of Course 2.1. Approach the simple knowledge of nerve and muscle. 2.2. Develop skills associated with improved health care and health care services. 2.3. dealing with health problems commonly met-within clinical practice 2.4. Create Basic scientific knowledge essential for sport physiology. 2.5. Inform lifelong learning competencies necessary for continuous professional development in exercise effect on different body systems. 2.6. Research education as related to medical practice & post graduation development in sport physiology.		٢- هدف المقرر :
٣- المستهدف من تدريس المقرر : <i>By the end of the course, students should be able to:</i>		



- 3.a1-** explain according to priority the main structure and mechanism of contraction of skeletal muscle.
- 3.a2** Explain the basic physiological processes in excitation contraction coupling.
- 3.a3** Memorize important physiological definitions and laws related to sport physiology.
- 3.a4** discuss the different mechanisms of homeostasis and how to use it in sport physiology.
- 3.a5** provide excellence in medical education, research belong exercise effect on different body systems.
- 3. a.6-** Describe the normal structure and function of the skeletal muscle.
- 3. a.7-** Describe the normal structure and function of the human body and mind at the molecular, biochemical, cellular, levels (including the principles of genetics), to maintain the body homeostasis during exercise.

أ- المعلومات
والمفاهيم:



3.b1- Identify deviations from the normal physiology and its effects.

3. b.2- Translate the consequences of physiological disorders into clinical manifestations and vice versa (interpret clinical manifestations into physiological data).

3. b.3- Illustrate physiological information in the form of simplified diagrams with complete data on it.

3. b.4- Interconnect different branches of physiology to sport physiology.

3. b.5- Analyze EEG curve.

3. b.6- Compare homologous physiological structures and processes.

3.b.7- analyze and summarize updated physiological information.

ب-

المهارات

الذهنية:



<p>By the end of the courses the student should be able:</p> <p>3.c.1- Perform efficiently the appropriate steps and procedures in measuring pulse, respiratory rate and arterial blood pressure during exercise.</p> <p>3.c.2- Perform simple experimental blood tests during exercise.</p> <p>3.c.3- Read a normal ECG paper in exercising persons.</p> <p>3.c.4- interpret different laboratory tests as isolated skeletal muscle</p> <p>3.c.5- asses nerve conduction study.</p> <p>3.c.6- asses skeletal and smooth muscle contraction</p> <p>3.c.7- perform and study EMG.</p> <p>3.c.8- Perform tests showing the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.</p> <p>3. c.9- Demonstrate the macroscopic and microscopic criteria of the altered structures and functions of the skeletal muscle under various conditions.</p>	<p>ج- المهارات المهنية الخاصة بالمقرر :</p>
<p>3. d.1- deal properly and cautiously in a lab.</p> <p>3. d.2- Use the sources of biomedical information to remain current with the advances in knowledge & practice concerning sport physiology.</p> <p>3.d.3- participate in community development .</p>	<p>د - المهارات العامه :</p>



			٤- محتوى المقرر:
	Lectures	Practical	Total
cular response to exercise	5hs	15hs	20
atory response to exercise	5hs	15hs	20
olic adaptation to exercise	5hs	15hs	20
of exercise to CNS function	5hs	15hs	20
	5hs	15hs	20
tion contraction coupling	2.5hs	7.5hs	10
ation to exercise	2.5hs	7.5hs	10
			120
5.1General lectures 5.2Practical sessions in the department lab. 5.3seminares 5.4confrence			٥- أساليب التعليم والتعلم
			٦- أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة
			٧- تقويم الطلاب :
7.a.1. Written exams: to assess knowledge, understanding and intellectual skills. 7.a.2. practical exam sto assess knowledge and understanding, intellectual, practical and professional and General and transferable skills. 7.a.3. Structured oral exams (Viva cards): to assess knowledge and understanding, intellectual and General and transferable skills			أ- الأساليب المستخدمة
7.b Only by final Exam: written, oral and practical examinations			ب- التوقيت



7.c. Final-term written examination 50% Oral examination 25% Practical examination 25%	ج- توزيع الدرجات
٨ قائمة الكتب الدراسية والمراجع :	
8.a Course Notes: <ul style="list-style-type: none">Lectures notes prepared by staff members in the department (20١١) .	أ- مذكرات
8.b. Essential Books (Text Books) 1- John E Hall (2006): guyton &hall physiology review. Eleventh edition. 2-Poul-Erik Paulev(2008): Medical Physiology And Pathophysiology Essentials and clinical problems. 3- William F Ganong (2003): review of medical physiology. Twenty – first edition.	ب- كتب ملزمة
8.c. Recommended Books 1- John E Hall (2012): guyton &hall text book of medical physiology.twelfeth edition. 2-Sembulingam K & Prema Sembulingam (2003): essentials of medical physiology .fourth edition.	ج- كتب مقترحة
8.d. Periodicals and Web Sites: www.jap.physiology.org . www.physiologyonline.physiology.org/cgi/content	د – دوريات علمية أو نشرات