

جامعة القادسية

كلية الطب

فرع الفسلجة

نموذج وصف المقرر

وصف المقرر

يوفر وصف المقرر هذا إيجازاً مقتضياً لأهم خصائص المقرر ومخرجات التعلم المتوقعة من الطالب تحقيقها مبرهنأ عما إذا كان قد حقق الاستفادة القصوى من فرص التعلم المتاحة. ولا بد من الربط بينها وبين وصف البرنامج؛

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| كلية الطب/جامعة القادسية College of Medicine /AL-Qadisiyah University | 1. المؤسسة التعليمية |
| الفسلجة Medical physiology | 2. القسم العلمي / المركز |
| PHZ222 | 3. اسم / رمز المقرر |
| يومي | 4. أشكال الحضور المتاحة |
| الفصل الأول والفصل الثاني 2016/2015 | 5. الفصل / السنة |
| 6 ساعة اسبوعياً | 6. عدد الساعات الدراسية (الكلي) |
| 2017 | 7. تاريخ إعداد هذا الوصف |
| 8. أهداف المقرر | |

- **Overall Aim of the Course:** -

- 1- To acquire an appropriate functional background of cells , tissues& systems.
- 2-To integrate physiological data & mechanisms with the ongoing basic sciences: anatomy histology & biochemistry and clinical applications.
- 3-To follow the rapidly changing and inflating details about molecular biology & genetics.
- 4-To explore in detail the functions of the autonomic , the neuromuscular , the respiratory and cardiovascular systems as well as their integration to achieve homeostasis.
- 5- To develop the basic scientific research skills as well as effective communication and team work attitude.

10. مخرجات المقرر وطرائق التعليم والتعلم والتقييم (Intended Learning Outcome)

Knowledge and Understanding

أ- الأهداف المعرفية

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

- 1- Describe the cellular functions at the organelle and molecular level.
- 2- Classify the functional organization of sympathetic and parasympathetic nervous systems.
- 3- Point out the basis of excitability (membrane potentials) in all living cells especially in nerve and muscle cells.
- 4- Explain the functions of the nerve cell and muscle fiber grossl and at the molecular level.
- 5- point out and explain the functions of different components of blood.
- 6- describe the structure , properties and functions of cardiac muscle grossly and at the molecular level.
- 7- point out the dynamics of blood and lymph flow and describe physiology of circulation through special organs.
- 8- describe the physiology of pulmonary ventilation, exchange of gases in the lung , and blood gas transport.
- 9- point out the physiology of regulation of respiration in health and disease states .
- 10 - Point out the functional anatomy of the kidney , physiology of glomerular filtration , renal tubular function and micturition.
- 11 - Discuss regulation of extracellular fluid composition and volume.
- 12 - Describe some biophysical laws and their relation to human physiology

Practical Skills

ب - الأهداف المهاراتية الخاصة بالمقرر.

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

- 1- Perform hematological tests : estimation of blood Hb, bleeding & clotting times , determination of the hematocrite value , the bleeding & clotting times and blood groups.
- 2- Perform the most important respiratory function tests.
- 3- Perform the measurement of the arterial blood pressure.
- 4- Manipulate a stethoscope hearing heart and respiratory sounds.
- 5- Record and read an electrocardiogram.
- 6- Perform the most important renal function tests.
- 7- Perform clinical methods ..

Teaching and Learning Methodes

طرائق التعليم والتعلم

Students Assessment

-A) **ATTENDANCE CRITERIA:** the minimal acceptable attendance in the practical & tutorial is 90 % . Students who fail to attend this percentage (in each half of the year will not be allowed to take the midyear and end of the year final theoretical exam and the end of the year practical exam.

-B) Assessment TOOLS:

| Tool | Purpose |
|-----------------------|--|
| Written examination | To assess knowledge & understanding |
| Practical examination | To assess some practical and intellectual skills |

C) TIME SCHEDULE:

| Exam | Month |
|-------------------------------------|----------|
| 1- First half of the academic year | October |
| First term exam | December |
| 2-mid half exam | January |
| 3- Second half of the academic year | March |
| 4- 2nd term exam | April |
| 5- Final exam | May |

-D) GRADING SYSTEM:

| Examination | % of Total Marks |
|--------------------------|------------------|
| 1- quizzes | - |
| 2- 1 st -term | 10% |
| 3- Mid-year | 20% |
| 4-2 nd term | 10%- |
| 5- Final exam: | 60% |
| a- Written | 40% |
| b- Practical | 20% |
| Total | 100% |

-E) Examinassions description:

| Examination | Description |
|----------------|---|
| 1- quizzes | |
| 2- First term | Objectively structured questions |
| 3- Mid-year | MCQ (single best opinion) + true & false + cases + problem solving + matching items . |
| 4- Second term | |
| 5- Final exam: | |
| a- Written | MCQ (single best opinion) + true & false + cases + problem solving + matching items +short essay Qs |
| b- practical | In the lab , at multiple phases through the practical courses . |

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| <p style="text-align: center;">General Intellectual Skills ج- الأهداف الوجدانية والقيمية</p> <p>1- Interpret the most important physiological laboratory results (blood , Respiratory , , to distinguish a physiological from a pathological condition.</p> <p>2- Comment , on some clinical parameters such as : ABP, ECG, & pulmonary functions for a normal individual.</p> <p>3- Integrate physiology with other basic and clinical sciences.</p> <p>.</p> |
| <p style="text-align: center;">Teaching and Learning Method طرائق التعليم والتعلم</p> <p>Lectures -Practical classes (laboratory training)</p> |
| <p style="text-align: right;">طرائق التقييم</p> |
| <p>Written examination: Assessment of knowledge and understanding. Also intellectual skills Practical examination: Assessment of knowledge and understanding and professional skills</p> |
| <p style="text-align: center;">د - المهارات العامة والتأهيلية المنقولة (المهارات الأخرى المتعلقة بقبالية التوظيف والتطور الشخصي).</p> <p>General skills & Attitudes</p> <p><u>General and transferable skills:</u> <i>By the end of the course, students should be able to:</i></p> <ol style="list-style-type: none"> 1- Work separately or in a team to research and prepare a scientific topic. 2- Present clearly and effectively a scientific topic in a tutorial , a staff meeting or the yearly scientific day. 3- Present physiological data in a graphical form. <p><u>. professional attitude and behavioral skills</u> 1-Respect and follow the institutional code of conduct.</p> |
| <p style="text-align: center;">د - المهارات العامة والتأهيلية المنقولة (المهارات الأخرى المتعلقة بقبالية التوظيف والتطور الشخصي).</p> <ol style="list-style-type: none"> د1- تاهيل الطالب كمرجات لتغذية المؤسسات الصحية باطباء اكفاء د2- تاهيل الطالب لاكتساب مهارات تؤهله لان يكون طبيب ناجح د3- تطوير مهارات وقدرات الطلبة المتفوقين لاكمال دراستهم العليامستقبلا |

Facilities used for teaching this course include

12 التحتية البنية

Lecture halls:
Information technology / AV aids
Models .

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| <p>Basic Materials:</p> <p>- Department books available for students, at the faculty bookshop</p> | <p>1- الكتب المقررة المطلوبة</p> |
| <p>Guyton : Textbook of Medical physiology.</p> <p>Ganong : Review of medical physiology.</p> | <p>2- المراجع الرئيسية (المصادر)</p> |
| <p>- <u>Recommended books:</u></p> <p>Illustrated medical physiology .</p> <p><u>Periodicals, Web sites, ... etc:</u></p> | <p>ا- الكتب والمراجع التي يوصى بها (المجلات العلمية , التقارير ,)</p> |

| Course contents | |
|-----------------|--|
| 1 | General Organization of the Human Body and Homeostasis |
| 2 | The Cell Physiology |
| 3 | Genetic Control of Protein Synthesis, Cell Function, and Cell Reproduction |
| 4 | Transport of Substances Through Cell Membranes |
| 5 | Excitable tissue Membrane Potentials and Action Potentials |
| 6 | Contraction of Skeletal Muscle |
| 7 | Excitation of Skeletal Muscle: Neuromuscular Transmission and Excitation-Contraction Coupling |
| 8 | Contraction of Smooth Muscle |
| 9 | Renal physiology The Body Fluids and Kidneys |
| 10 | Kidney function |
| 11 | Urine formation |
| 12 | Glomerular Filtration Rate |
| 13 | Mechanism of reabsorption and secretion |
| 14 | Acid-base balance |
| 15 | endocrinology |
| 16 | Chemistry of hormones |

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| 17 | Hypothalamus |
| 18 | Anterior pituitary gland |
| 19 | Posterior pituitary gland |
| 20 | Thyroid gland |
| 21 | Adrenal gland |
| 22 | Insulin and glucagon |
| 23 | Diabetes mellitus |
| 24 | Calcium and phosphate homeostasis |
| 25 | Vitamin D |
| 26 | Parathyroid gland |
| 27 | Calcitonin hormone |
| 28 | Reproductive system Male Reproductive system |
| 29 | Female Reproductive system |
| 30 | Pregnancy and lactation |
| 31 | Physiology of blood Introduction to hematology |
| 32 | Types of blood cells |
| 33 | Hematopoiesis |
| 34 | Function formation of RBC |
| 35 | Types of Anemia and polycythemia |
| 36 | Blood coagulations |
| 37 | Platelets formation and functions |
| 38 | Types of immunity |
| 39 | Types of white blood cells : leukemia |
| 40 | Inflammation: Role of Neutrophils and Macrophages |
| 41 | Respiratory system Pulmonary Ventilation |
| 42 | Pulmonary Circulation, Pulmonary Edema, Pleural Fluid |
| 43 | Physical Principles of Gas Exchange; Diffusion of Oxygen and Carbon Dioxide Through the Respiratory Membrane |
| 44 | Transport of Oxygen and Carbon Dioxide in Blood and Tissue Fluids |
| 45 | Regulation of Respiration |
| 46 | Respiratory Insufficiency Pathophysiology, Diagnosis, Oxygen Therapy |
| 47 | GIT regulation of GI function, functional types of movement of GIT |
| 48 | Digestion : types of digestion Salivary gland |
| 49 | Composition of saliva Regulation of salivary secretion |
| 50 | Swallowing Esophagus |

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| 51 | Stomach regulation of gastric secretion stimulation of acid secretion |
| 52 | Digestion of various food : hydrolysis Digestion of CHO |
| 53 | Digestion of proteins Digestion of fat |
| 54 | Absorption of water & ions Absorption of nutrients |
| 55 | Absorption of fat |
| 56 | Pancreatic secretion Secretin of HCO₃ |
| 57 | Regulation of pancreatic secretion |
| 58 | Small intestinal secretion Large intestinal secretion |
| 59 | Secretion of bile by liver Action & storage of bile , stone formation |
| 60 | CVS Heart Muscle; The Heart as a Pump and Function of the Heart Valves |
| 61 | Rhythmical Excitation of the Heart |
| 62 | The Normal Electrocardiogram |
| 63 | Electrocardiographic Interpretation of Cardiac Muscle and Coronary Blood Flow Abnormalities: Vectorial Analysis |
| 64 | Cardiac Arrhythmias and Their Electrocardiographic Interpretation |
| 65 | Overview of the Circulation; Medical Physics of Pressure, Flow, and Resistance |
| 66 | Vascular Distensibility and Functions of the Arterial and Venous Systems |
| 67 | The Microcirculation and the Lymphatic System: Capillary Fluid Exchange, Interstitial Fluid, and Lymph Flow |
| 68 | Local and Humoral Control of Blood Flow by the Tissues |
| 69 | Nervous Regulation of the Circulation, and Rapid Control of Arterial Pressure |
| 70 | Dominant Role of the Kidney in Long-Term Regulation of Arterial Pressure and in Hypertension: The Integrated System for Pressure Control |
| 71 | Cardiac Output, Venous Return, and Their Regulation |
| 72 | Muscle Blood Flow and Cardiac Output During Exercise; the Coronary Circulation and Ischemic Heart Disease |
| 73 | Cardiac Failure |
| 74 | Heart Valves and Heart Sounds; Dynamics of Valvular and Congenital Heart Defects |
| 75 | Muscle Blood Flow and Cardiac Output During Exercise; the Coronary Circulation and Ischemic Heart Disease |
| 76 | Nervous system Motor function of spinal cord |

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| 77 | Brainstem control of motor function |
| 78 | Cerebellum & basal ganglia |
| 79 | Intellectual function of brain |
| 80 | Limbic system |
| 81 | ANS |
| 82 | CSF |
| 83 | SPECIAL SENSE Optics of vision Receptors & neural function of retina |
| 84 | Neurophysiology of vision |
| 85 | Physiology of of hearing & equilibrium |
| 86 | Sense of taste& Sense of smell |

| Lab. Experiment Assignments | Notes |
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| Introduction to physiology laboratory | |
| Types of anticoagulant | |
| hemocytometer | |
| Red blood cell count | |
| White blood cell count | |
| Differential white blood cell count | |
| Hemoglobin estimation | |
| Hematocrit (PCV) | |
| Red cell Indices | |
| Bleeding and clotting time | |
| Blood groups and Rh factor | |
| ESR | |
| Pulmonary function test | |
| ECG | |
| Blood pressure measurement | |
| Blood pressure changes with excursive & change posture | |
| Tinic fork | |

اعداد

. ا.م.د. هدى جبار البديري

وزارة التعليم العالي والبحث العلمي
جهاز الاشراف والتقويم العلمي
دائرة ضمان الجودة والاعتماد الاكاديمي

استمارة وصف البرنامج الاكاديمي للكليات والمعاهد

الجامعة : القادسية

الكلية : الطب

القسم العلمي : الفلسفة

تاريخ ملئ الملف :

التوقيع :

اسم المعاون العلمي : ا.د. حمادي

التاريخ : 2017/2/21

التوقيع :

اسم رئيس القسم : م.د. علي هادي سبهان

عبطان

التاريخ : 2017/2/21

دقق الملف من قبل

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