26763 - Physiology II

Información del Plan Docente

Academic Year	2016/17
Academic center	104 - Facultad de Medicina 229 - Facultad de Ciencias de la Salud y del Deporte
Degree	304 - Degree in Medicine 305 - Degree in Medicine
ECTS	6.0
Course	1
Period	Second semester
Subject Type	Basic Education
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

5.2.Learning activities

5.3.Program

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LEARNING ACTIVITIES. PHYSIOLOGY

Theoretical classes

RENAL PHYSIOLOGY

1.Homeostasis and renal function

2. Structure and general functions of the kidney.

3. Glomerular ultrafiltration. Clearance.

4. Reabsorption and tubular secretion. Tm.

5. Kidney osmotic activity. Osmotic countercurrent multiplier system.

6. Regulation of water balance. Osmolar clearance. Regulation of osmolarity.

7. Balance and distribution of sodium, chloride ions. renal handling of sodium and chloride. Regulation of its balance sheet. Renin -Aldosterona system. Regulation of distribution. Renal regulation of extracellular volume.

8. Balance and distribution of potassium. renal handling of potassium. Adjusting the balance. Regulation of distribution.

9. Balance and distribution of phosphorus and calcium magnesium. Management kidney. Adjusting the balance.

10. Renal regulation of acid-base balance.

11. Functions of the bladder and urinary tract. Urination

FUNCTIONAL HEMATOLOGY

12. General characteristics and functions of blood.

13. Components and functions of the plasma.

14. Red cells: characteristics and functions.

15. erythropoiesis and its regulation. Iron metabolism.

16. red cell antigens.

17. Types and functions of leukocytes, leucopoiesis.

18. Hemostasis physiological. vascular responses. Platelet functions.

19. Blood Clotting. Activation and regulation of coagulation.

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20. physiological fibrinolysis. Anticoagulation mechanisms. functional tests of hemostasis.

Practical classes

Test concentration-dilution of urine

Urine analysis. urinary sediment

functional problem "Hypernatremia"

functional problem "Hemostasis"

Blood Collection

Sedimentation Rate

Blood Types

Hematocrit

Clotting time and prothrombin time

osmotic resistance and haemolysis

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Formula by flow cytometry

Obtaining platelet-rich plasma and determination cytometry

LEARNING ACTIVITIES. IMMUNOLOGY

Theoretical classes

1. The immune system. Structure and organization of the immune system. Immune system components. Organs, cells, immune system genes. Antigens

2. Immune System Cells

3. Antigens. Immunoglobulins. Structure

4. Immunoglobulins. Function

5. Cytokines. Adhesion molecules. Ligands. Chemokines. Receptors

6. Immune response. HLA system. Presentation of antigens

7. Cell response. T lymphocytes

8. Cellular response. Lymphocytes B.

9. cytotoxic response. Cytotoxic lymphocytes. NK

10. Immune tolerance. The regulation of the immune response. Development, evolution and aging of the immune system.

Seminars

1. Study of the humoral response

2. Study of cellular response

Practical classes

1. Lymphocyte separation

2. cell morphology

3. Agglutination reaction

5.4.Planning and scheduling

5.5.Bibliography and recomended resources